

JUNE, 1949

# Commercial Refrigeration

AND AIR CONDITIONING



MERCHANDISING, SELLING, INSTALLATION AND MAINTENANCE OF  
COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT

**BRUNNER**  
SINCE 1906

**REFRIGERATION** helps you serve better

## Cast a Critical Eye on these Compressor parts!



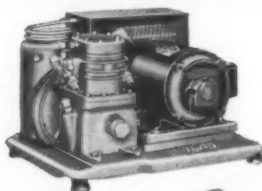
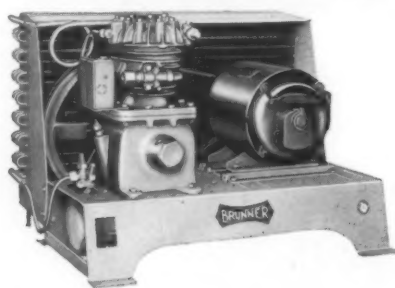
The true *usefulness* of any refrigeration equipment stems from the operating efficiency of the compressor. The parts are few...assembly is relatively simple. It's what *you can't see* that is so vitally important in measuring the worth of your investment...proven engineering, durability of metals and the watch-like precision of manufacture.

Before final selection of refrigeration equipment, it will be well worth your time to talk with a Brunner\* representative. Ask for *evidence* of BTU capacities. Compare operating speeds. Get the *facts* on service life, dependability, operating economy. Know *every reason* why more and more buyers specify Brunner Refrigeration Condensing Units.

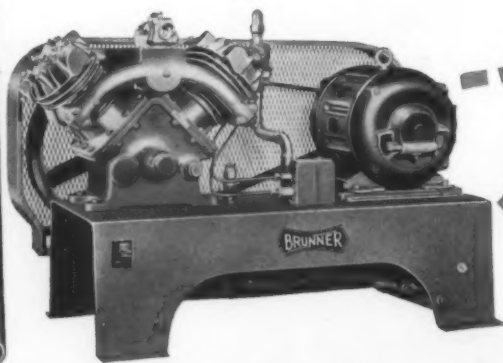
**BRUNNER MANUFACTURING CO.**

Utica 1, New York, U. S. A.

\*Equipment manufacturers, installation contractors, service companies, can profit thru identification with Brunner. Have the advantages of a complete, customer-accepted line. A Brunner factory representative will call on request and without obligation.



**REFRIGERATION  
CONDENSING UNITS**  
...a size and type  
for every purpose



**BRUNNER**  
SINCE 1906

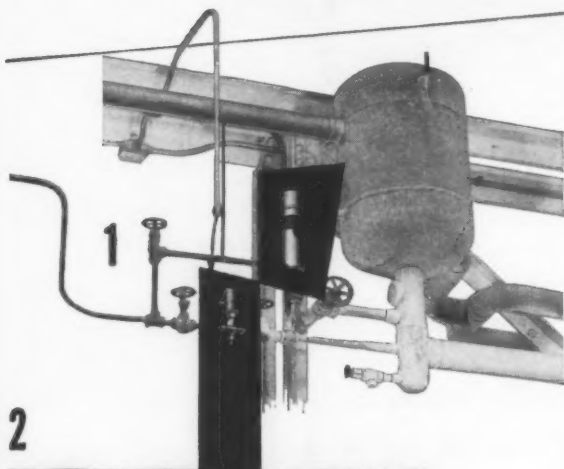
**AIR AND WATER COOLED MODELS**  
1/4 HP. TO 30 HP.

# the world's largest refrigerated warehouse

equipped with **ALCO VALVES!**



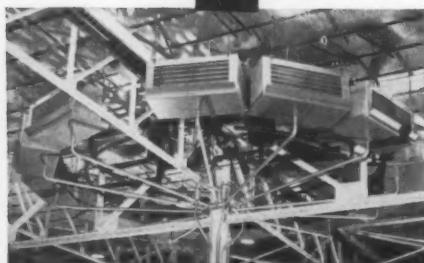
The Alford Warehouse, Dallas; 7,500,000 cubic feet of cold storage, and 8,000,000 cubic feet of air conditioned storage.



A wide range of cold storage temperatures will be efficiently handled by:

- ▶ M8 SOLENOID VALVES controlled by
- ▶ J5 FLOAT SWITCHES on liquid lines;
- ▶ EPR 600 Series EVAPORATOR PRESSURE REGULATORS controlled by
- ▶ D922 TEMPERATURE PILOTS on suction lines.

However large or small, simple or complex your requirements may be... you'll find the right answer in ALCO's complete line of refrigerant controls. Your ALCO wholesaler will be glad to advise you.



- 1 ALCO J5 Float Switch and M8 Solenoid Valve controlling flow of liquid ammonia into surge drum.
- 2 Typical cluster of ceiling blower coils with ALCO Controls on both liquid and suction lines.



Design and Manufacturers of  
Automatic Expansion  
Valves, Evaporator Pressure  
Regulators, Solenoid Valves,  
Float Switches.

## ALCO VALVE CO.

843 KINGSLAND AVE. • ST. LOUIS 5, MO.

*Here's why this compact Carbonator  
is EASY to sell...EASY to install...*



**New packaged TEMPRITE saves real money for owners  
of Taverns, Soda Fountains, Roadside Stands, etc.**

You can get steamed up over the new Temprite Carbonator with little effort... and you can sell it like hot cakes! It's neat, compact and reliable. It gets the last full measure of *instantaneous carbonation* from every tank of CO<sub>2</sub> gas—pays for itself in no time at all and saves real money for its owner! There's no waste of CO<sub>2</sub> gas. No venting. No purging.

There are no flat, unpalatable drinks. Every glass sparkles with zip and zing. *Carbonation is automatic and controlled.*

But just listen to this. The Temprite user gets up to 6450 glasses of highly carbonated water from a 20 lb. tank of CO<sub>2</sub> gas. Can you top this?

The stainless steel carbonator itself is highly simplified; contains no moving parts, and packaged as it is with pump, motor and relay assembly, only three simple connections are necessary for a fast, easy installation. Fits in practically any location or under any fountain. Complete assembly weighs only 59 pounds.

*Use the handy coupon below for full details.*

**TEMPRITE PRODUCTS CORP.**  
41 Piquette Avenue  
Detroit 2, Michigan

Please send me complete details on your new packaged Temprite Carbonator.

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_

**Temprite**  
Products Corp. 41 Piquette, Detroit 2

Manufacturers of commercial and cabinet type water coolers, industrial water coolers, carbonators, draught beer coolers, soda fountain coolers, temperature control valves, oil separators, equalizer tanks, heat exchangers, etc.



JUNE, 1949

VOLUME 6, NO. 6

# Commercial Refrigeration

AND AIR CONDITIONING

Established 1944 as  
THE REFRIGERATION INDUSTRY

THIS MAGAZINE has no  
official affiliation with ANY  
group, society or association.

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AND AIR CONDITIONING

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Teletypewriter: CV-233

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LOS ANGELES 14  
FRED W. FRISSENFELDT  
1250 Wilshire Boulevard  
Room 403

THE COVER . . . Modern restaurant kitchens such as this one comprise an excellent market for commercial refrigeration equipment. The kitchen pictured is part of a complete restaurant installation sold with the help of an intelligently prepared job proposal such as described in the article commencing on page 44 of this issue.

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Published monthly by REFRIGERATION PUBLICATIONS, INC., an affiliate of INDUSTRIAL PUBLISHING CO., publishers of APPLIED HYDRAULICS, DIE CASTINGS, FLOW, INDUSTRY & WELDING, OCCUPATIONAL HAZARDS, and THE TAPICAS INDUSTRY. Member, Controlled Circulation Audit, Inc., and National Business Papers Association. Not responsible for unsolicited editorial material.

Subscription rates: United States and possessions—\$3.00 per year, \$5.00 for 2 years; Canada—\$4.00 per year, \$6.00 for 2 years; Foreign—\$5.00 per year. Single copy price, 30 cents. All subscriptions subject to individual acceptance by the publisher.

Acceptance under the Act of June 3, 1934, at Milwaukee, Wisconsin, authorized March 26, 1947.

This is the fourth of a series of advertisements outlining the advantages of "Freon" refrigerants.

## WHY "FREON" REFRIGERANTS ARE HIGHLY ENDORSED

### OUTSTANDING CHARACTERISTICS OF "FREON" REFRIGERANTS

- NONTOXIC
- NONFLAMMABLE
- NONEXPLOSIVE
- NONCORROSIVE
- ANHYDROUS
- PURITY
- QUALITY
- ACID FREE
- NARROW BOILING-  
POINT RANGE
- AVAILABILITY

#### ANHYDROUS—

*adj.*—destitute of water. "Freon" refrigerants are virtually moistureless—an important quality assuring the satisfactory performance of modern, compact air conditioning and refrigerating systems.

There are not more than ten parts of moisture in a million parts of "Freon-12" . . . the refrigerant used in most types of equipment. This dryness prevents freezing in capillary tubes and valves. It eliminates both the possibility of corrosion from water and the sludging of oil in compressors, evaporators and condensers. It also avoids short-circuiting hermetically sealed electrical parts . . . reduces risk of costly interruptions in service and aids in prolonging the useful life of the system.

Another advantage of "Freon" refrigerants is their safety factor. These refrigerants are nontoxic, nonflammable and nonexplosive, odorless and nonirritating. They meet building code requirements everywhere and are included among safe refrigerants indicated in Group 1 of the A.S.A. B-9 Code. Even serious leakage within the system won't cause injury to people or pets, foods, flowers, fabrics or finishes.

These outstanding characteristics of "Freon" refrigerants are the product of an intricate manufacturing procedure, every step of which is under laboratory control. Frequent tests assure the uniform quality and purity of "Freon" refrigerants and contribute in no small way to the efficient performance of the system.

There's a "Freon" refrigerant suitable for every commercial, industrial and household need, and engineers everywhere have no hesitation in highly endorsing the use of equipment designed to use these safe refrigerants.

Kinetic Chemicals, Inc.  
Tenth and Market Sts., Wilmington 98, Del.



# FREON *SAFE* REFRIGERANTS

"Freon" is Kinetic's registered trade mark for its fluorinated hydrocarbon refrigerants.

**NEW  
UNITED  
FREEZER**

**NEW THERMO-GUIDE  
TEMPERATURE  
INDICATOR.**

**NEW "FOOD  
COMPARTMENT  
FINISH"...ACID,  
GREASE, CHIP  
RESISTANT.**

**NEW  
ALL STEEL  
WELDED  
CONSTRUC-  
TION.**

**NEW  
DUAL COMPARTMENT  
—DUAL DOOR DESIGN FOR  
MAXIMUM ECONOMY!**



## "BALANCED FREEZING"

### WITH THE **NEW *United* UP RIGHT FREEZER**



15 cu. ft. Model UF15

**BALANCED FREEZING.** Scientific placement of cooling coils, more than adequate extra heavy insulation, two separate food compartments, dual doors (to minimize cold loss)—combine to insure balanced freezing at minimum cost.

**5-YEAR WARRANTY PLAN.** All freezers are equipped with dependable hermetically sealed condensing units which are covered by United's "5-Year Warranty Plan".

**GENUINE BEAUTY.** The new all steel welded *United Freezer* finished in gleaming white du Pont Dulux baked enamel, chrome trim and rounded corners is truly a beautiful fixture in any establishment.

**QUALITY THROUGHOUT.** The United 15 cubic foot freezer has the new white du Pont "food compartment finish" to assure a lasting abrasion, acid, grease and chip resistant life.

**DESIGNED, ENGINEERED AND MANUFACTURED—HUDSON, WISCONSIN**

**UNITED REFRIGERATOR COMPANY • Hudson, Wisconsin**

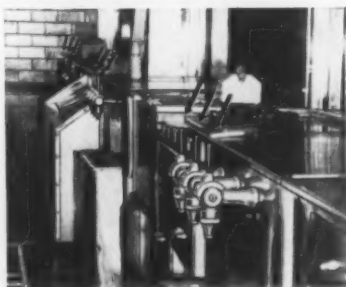
# NEW CINCINNATI GARDENS INSTALLS SELECT-FLO DISPENSING SYSTEMS



## 78 Draft Arms Serve Thousands of People with a Speed and Ease Never Before Equalled

The new Cincinnati Gardens, one of the largest and finest sport arenas in the country, provides unobstructed vision for every customer. It is equipped with the latest and best facilities for every indoor event including hockey, boxing, basketball, circuses, ice shows, etc.

Serving refreshments to crowds of this size presents a problem of mass service in a limited amount of time. That's why Sports Service Inc. of Buffalo again turned to Trumpet Select-Flo Systems as the answer. One person must serve hundreds of thirsty customers in minutes. Each draft arm draws glass after glass of pre-chilled, perfectly mixed carbonated drinks.



*A battery of three self-contained Select-Flo units at one counter. Each with three draft arms serves an assortment of thoroughly mixed carbonated drinks of the finest quality.*



### TYGON FLEXIBLE PLASTIC TUBING IS TRANSPARENT, NON-TOXIC

Mirror-smooth, flexible plastic tubing is fitted with snap-on sockets so that syrup tanks can be changed in a matter of seconds. Tygon Tubing is non-toxic, non-contaminating and can be cleaned with steam or hot water.

## Complete, Self-Contained Units Each Serve 3 to 5 Different Carbonated Drinks

Each unit contains its own refrigeration equipment, syrup tanks and carbonator, providing continuous capacity even during the busiest periods. Cabinet facing is polished stainless steel. Syrup is prechilled. Mixing head accurately controls proportion of syrup and soda. Units are easy to install and service.

Select-Flo saves hand mixing and icing. It eliminates case goods, bottle opening, breakage. It makes more money wherever it is used.



## Cincinnati Gardens Installation Points to Similar Profit Opportunities in Your Territory

This is just one of many large-scale installations. Trumpet Select-Flo Systems are used in Commisky Park, Hawthorne Race Track and the Coliseum at Chicago. Cleveland's Randall Race Track and River Downs at Cincinnati also depend on Select-Flo. Wherever large crowds assemble there is a real profit opportunity for Refrigeration Service Houses. More important, however, is the year-in-year-out volume in selling, installing and servicing Select-Flo Systems in bars, bowling alleys, drive-ins, clubs, theatres, industrial cafeterias, etc.

If your company has both sales and service facilities, we urge you to write for full information. Many good territories are available. Address correspondence to:

**THE WOOSTER BRASS COMPANY**  
WOOSTER, OHIO

Manufacturers of



# SELECT-FLO SYSTEMS



**76 TOOLS EVERY  
REFRIGERATION  
SERVICEMAN  
MUST HAVE!**



**RF85 SET**

## Here's a Hard-Working Partner for a good **REFRIGERATION SERVICEMAN**

### **BONNEY RF85 SET OF 76 TOOLS**

#### **includes:**

1/4" and 3/8" square drive sockets & attachments, double offset wrenches, combination wrenches, right angle wrenches, flare-nut wrenches, hexagon keys, screw drivers, pliers, tube benders, tube cutter, flaring tool, hacksaw, hammer, shop knife

When your "know-how" is teamed up with this complete and handy tool set you are bound to make more money by speeding up your jobs. You can reach into this red crackle-finish metal box—mighty handsome!—and pull out just the tool you need to service toughest jobs. Get yourself a handy "partner"—this Bonney RF85 Set of 76 easy-handling, extra-tough tools. Whether you need a set or a single tool—for a complete description of the entire line-up...

*Mail Coupon Below*

for NEW BONNEY CATALOG and name of nearest Bonney refrigeration jobber.



# B O N N E Y

**BONNEY  
TOOLS**

*World's Finest*

# TOOLS

**BONNEY FORGE & TOOL WORKS**



**ALLENTOWN, PA.**

**BONNEY FORGE & TOOL WORKS, ALLENTOWN, PA.**

Please send me without charge, latest catalog showing Bonney Tools and Tool Sets.

RI 1-49

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



# you're all set...

## HERE'S the Copper Refrigerator Service Tube that's EXTRA

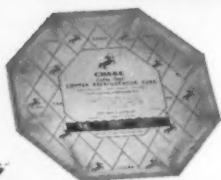


**THIS** extra soft tube is easily worked. New, uniform temper makes it easy to bend and flare. It is given automatically controlled anneal which assures clean, bright, oxide-free tube. New end seal keeps tube clean. Fits anywhere tube does—need not be removed until ready for fitting connection. Sizes  $\frac{1}{8}$ " to  $\frac{3}{4}$ " diameters; in 50' standard lengths.

**SOFT!**



## ...HERE'S the octagonal package that's EXTRA HANDY!



**THIS** extra handy package prevents two-layer coil of tube from shifting—maximum protection with minimum weight. Saves shelf space. May be reused for keeping cut coils clean and identified. Specifications are easily read on a large size label.



## ...HERE'S a typical Chase Wrought Copper Fitting for joints that are EXTRA TIGHT!



**CHASE** Wrought Copper Fittings expand and contract with the tube . . . joints are permanently tight! They fit the tube accurately—there are no inside ridges to hamper refrigerant flow.



ASK your parts distributor for Chase Extra Soft Copper Refrigerator Tube in the extra handy package. And be sure to specify Chase Wrought Copper Fittings...they're not affected by ordinary vibration or pressure. That's the combination for better, longer-lasting connections.

# Chase



*the Nation's Headquarters for*  
**BRASS & COPPER**

WATERBURY 20 CONNECTICUT

SUBSIDIARY OF KENNECOTT COPPER CORPORATION

THIS IS THE CHASE NETWORK . . . handiest way to buy brass

ALBANY ATLANTA BALTIMORE BOSTON CHICAGO CINCINNATI CLEVELAND DALLAS DETROIT HOUSTON INDIANAPOLIS KANSAS CITY, MO. LOS ANGELES MILWAUKEE MINNEAPOLIS NEWARK NEW ORLEANS NEW YORK PHILADELPHIA PITTSBURGH PROVIDENCE ROCHESTER ST. LOUIS SAN FRANCISCO SEATTLE WATERBURY (Sales Office Only)

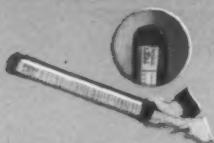
# MORE PROFITS

...in your store



...on home service calls

## WITH DAYTON V-BELTS



**MATCHOMETER** for determining correct V-Belt size for replacement.



**INSTRUCTION and SUGGESTION FOLDER** of display hints and selling ideas.



**WALL and WINDOW POSTERS**... colorful, attention-getting.



**CATALOG No. 44**... complete listings of all types for correct V-Belt replacement.



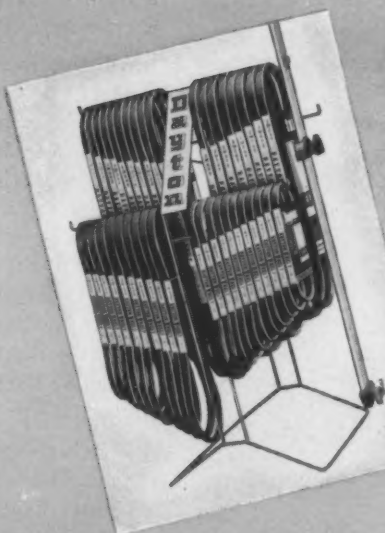
**BELT-SIZE CARDS**... belt numbers, and sizes for quick, ready-reference.

Make yourself V-Belt headquarters in your community... increase your V-Belt profits... get just the right Dayton Salesmaker to fit your needs.

Attractive, colorful, a Dayton Salesmaker will up your store sales and, at the same time, provide a handy stock to take care of home service calls. The only V-Belt built with Raytex Fortified Cord,

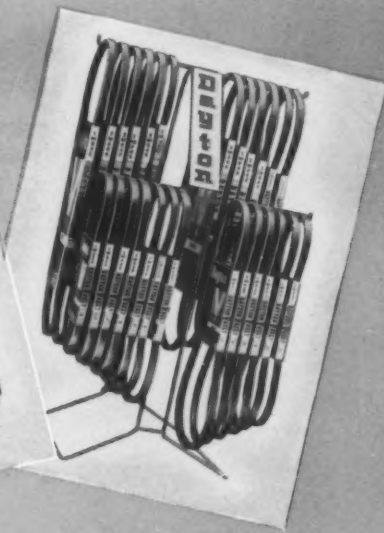
Dayton's build customer satisfaction because their *minimum stretch*, *greater flex strength* and *longer life* guarantee top-quality service.

Each Dayton Salesmaker comes complete with rack and the sales help described on this page. Write today to Dayton Rubber, Dayton, Ohio, for complete information on the Salesmaker that best fits your requirements.



### SENIOR SALESMAKER

... 39 fastest selling V-Belts for refrigerators, washing machines, pumps and other home and small machinery requirements.



### JUNIOR SALESMAKER

... 25 fastest selling V-Belts for all small machinery use. Especially designed for store use where traffic is limited.

# Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

## Carrier compressors keep oil from robbing refrigeration



**O**NCE oil gets into the coil with the refrigerant, it becomes a thief. It robs the refrigerant of its effectiveness and ups operating costs. The more oil in the coil—the greater the theft. That's not the kind of installation your customers want—and that's not the kind they get with Carrier refrigeration.

Most ordinary compressors get off to a good start, but bog down after a few months because of their inability to keep oil in its place. Carrier Compressors, however, deliver efficient refrigeration from the beginning and keep on delivering it year after year at low operating cost. Here's why: by a series of engineered steps, they keep oil in the crankcase where it belongs. An unusually large suction manifold, a 90° turn in the gas flow and an oil return check valve between the suction manifold and the crankcase are among the Carrier features that prevent oil from taking a "free ride" into the coil.

For best results, install Carrier balanced refrigeration. That's a Carrier Compressor and a Carrier Cold Diffuser. Designed and built with all the skill and experience that have made Carrier a leader in the field, they're perfect partners for delivering maximum refrigeration at minimum cost. They provide the standout refrigeration your customers want—and that leads to more jobs for you. Write for the Carrier Compressor Catalog CR240 or the Carrier Cold Diffuser Catalog CR241. Carrier Corporation, Syracuse, New York.

**Carrier**

AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING



*Way out  
in front*

# IMPERIAL *Hi-Duty*<sup>®</sup> TUBE CUTTER

**Free Wheeling Ball Bearing  
Action Makes Tube Cutting  
Easier and Faster**



Showing retractable reamer  
in operating position.



Illustration (actual  
size) shows tube  
cutter being used to  
remove a flare from  
a piece of tubing.

Never before has there been a tube cutter that makes it so easy to cut tubing quickly, accurately, squarely. Outstanding advantages, illustrated at right, truly make this the finest tube cutter!

Cuts copper, brass, aluminum, Bundy steel, block tin and lead tubing, hard or soft temper. Has broad range—cuts tubing  $\frac{1}{8}$ " to 1" O.D. inclusive.

Extremely compact—overall length, only  $4\frac{1}{2}$ ". High strength, lightweight aluminum alloy body. Makes quick, clean, right angle cuts. Leaves no burrs or chips.

Here is a tool you'll be proud of. It is built to the quality standards which for years have made Imperial Tube Cutters the overwhelming favorites. Ask your jobber for it... and others in complete Imperial Tubing Tool Line. Ask for Folder 347.

No. 274-F Hi-Duty Tube Cutter for  $\frac{1}{8}$ " to 1" O.D. tubing, inclusive. Net wt. approx. 6 oz. Price each...**\$3.30**

THE IMPERIAL BRASS MFG. CO.

536 S. Racine Ave., Chicago 7, Ill.



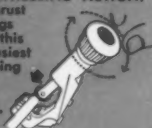
# IMPERIAL

*See  
Your  
Jobber*

FITTINGS • VALVES • FILTERS • DRIERS • FLOATS • CHARGING LINES  
TOOLS FOR CUTTING, FLARING, BENDING, COILING, PINCH-OFF AND SWEDGING.

## FREE WHEELING ACTION.

Ball thrust  
bearings  
make this  
the easiest  
operating  
of all  
tube  
cutters.



TUBE ROLLS  
on rollers.  
FLARE CUT-

OFF GROOVE makes  
it possible to remove a  
cracked flare without  
wasting any tubing.



RETRACTABLE  
REAMER locks  
in open or closed  
position. Folds out of  
way when not in use.



ENCLOSED BALL  
BEARING FEED  
MECHANISM.

Protection  
against  
dirt and  
damage  
assured  
lasting,  
easy operation



"Keep cool with ESTON!"

# Eston

## REFRIGERANTS

### METHYL CHLORIDE SULPHUR DIOXIDE

### METHYLENE CHLORIDE

Distributors of

## FREON 11-12-21-22-113-114



Uniform high quality,  
low moisture content  
and fast, dependable  
service mark the Eston  
line of refrigerants.  
Buy from the Eston  
Wholesaler; he is your  
best source of supply.

**YOUR ESTON  
WHOLESALE  
IS A GOOD MAN  
TO KNOW...**

**ABILENE, TEX.**  
C & H Distributing Co.  
**ATLANTA, GA.**  
Bowen Refrigeration Supplies, Inc.  
**BATON ROUGE, LA.**  
Atlas Refrigeration Supplies, Inc.  
**BILLINGS, MONT.**  
Refrigeration Supply Co.  
**BOISE, IDA.**  
Refrigerative Supply, Inc.  
**DALLAS, TEX.**  
Refrigeration Supply Co.  
**DENVER, COLO.**  
McCombs Refrigeration Supply Co.  
Thermo Supply, Inc.  
**EAST ST. LOUIS, ILL.**  
Illinois Electric Works  
**EL CENTRO, CALIF.**  
Refrigeration Supplies Distributor  
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Refrigeration Supply Co., Inc.  
**FOND DU LAC, WIS.**  
M. D. Guenther Co.  
**FORT WORTH, TEX.**  
Refrigeration Supply Co.  
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G. C. Armour Co.  
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Refrigeration & Industrial Supply Co.  
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Refrigeration Equipment Co.  
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Refrigeration Supplies Distributor  
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Pacific Metals Co., Ltd.  
Refrigeration Supplies Distributor  
Thermal Products, Inc.  
**MIAMI, FLA.**  
Bowen Refrigeration Supplies, Inc.  
**MINNEAPOLIS, MINN.**  
Tempon, Inc.  
**NASHVILLE, TENN.**  
Sharr Co. of Tennessee  
**NEW ORLEANS, LA.**  
Acme Refrigeration Supplies, Inc.  
**OKLAHOMA CITY, OKLA.**  
Waugh & Robertson  
**PHOENIX, ARIZ.**  
Arizona Refrigeration Supplies, Inc.  
**PORTLAND, ORE.**  
Peerless Pacific Co.  
Refrigerating & Power Specialties Co.  
Refrigerative Supply, Inc.  
**PUEBLO, COLO.**  
McCombs Refrigeration Supply Co.  
**SACRAMENTO, CALIF.**  
Hinshaw Supply Co.  
**ST. LOUIS, MO.**  
Authorized Refrigeration Parts Co.  
Refrigeration Supplies, Inc.  
R. E. Thompson Co.  
**ST. PAUL, MINN.**  
Refrigeration Supply Co., Inc.  
**SALT LAKE CITY, UTAH**  
Flint Distributing Co.  
**SAN BERNARDINO, CALIF.**  
Valley Refrigeration Supply Co.  
**SAN DIEGO, CALIF.**  
Refrigeration Supplies Distributor  
**SAN FRANCISCO, CALIF.**  
Hinshaw Supply Co.  
Pacific Metals Co., Ltd.  
Refrigerating & Power Specialties Co.  
**SAN GABRIEL, CALIF.**  
Refrigeration & Industrial Supply Co.  
**SEATTLE, WASH.**  
Carl Chemical Co.  
Peerless Pacific Co.  
Refrigerating & Power Specialties Co.  
Refrigerative Supply, Inc.  
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Refrigerative Supply, Inc.  
Wakefield Supply Co.  
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Refrigerating & Power Specialties Co.  
Refrigerative Supply, Inc.  
**TAMPA, FLA.**  
Bowen Refrigeration Supplies, Inc.  
**TUCSON, ARIZ.**  
Arizona Refrigeration Supplies, Inc.  
**TULSA, OKLA.**  
Palmer Supply Co.  
**VANCOUVER, B. C.**  
J. P. Southcott & Co., Ltd.

**Products of ESTON CHEMICALS, Inc., Los Angeles**

# For more profitable "REACH-IN" and "BACKBAR" Installations



Specify this new Bush WJ Unit for installation at the juncture of wall and ceiling . . . to occupy minimum valuable storage space . . . to supply maximum circulation with no blast. Easy to install . . . simple to service . . . and a real good-will builder for you because Bush design, engineering, quality materials, careful construction and conservative rating insure lasting customer satisfaction. The Bush WJ Unit (capacities 800 to 6500 BTU's per hour at 10° TD) and all other Bush Heat Transfer Products are available now through refrigeration and air conditioning wholesalers everywhere.



## BUSH UNIT COOLERS



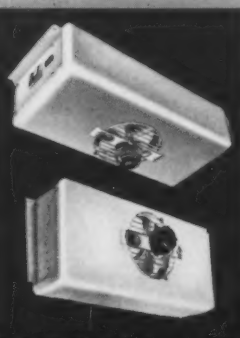
Address Dept C2 for  
your copy of the Bush  
Refrigeration Catalogue

*Buy the Best  
and the  
Best is Bush*

**BUSH ICE MAKERS** in twelve stock sizes . . . 84 to 384 cubes. Most models available with quick release trays.



**CEILING-WALL UNIT** is the answer in low-head-room and reach-in boxes . . . complete flexibility, can be mounted on either wall or ceiling.



**WALL-MOUNTED UNIT** for low-ceiling market coolers and installations where space is at a premium.



**BUSH JR. PANEL UNIT** for back-bars, reach-in coolers, beverage coolers and small space installations.



BUSH MANUFACTURING CO. • WEST HARTFORD 10, CONN.

*Field-Tested  
Features in...*

# HENRY WING CAP VALVES



▲ Non-Ferrous Bolted Bonnet Valve meets Government specifications.

Wing Cap may be inverted and socket used to operate valve.

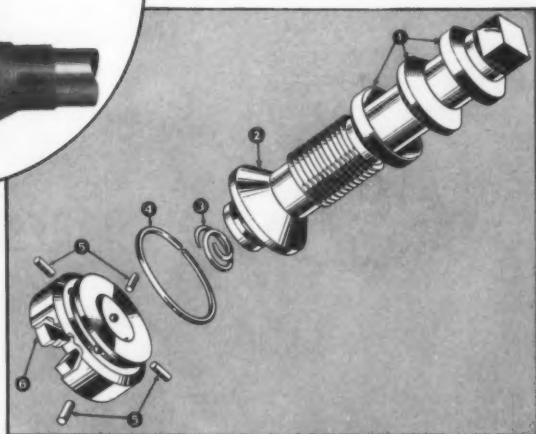


## BOLTED BONNET DESIGN for Maximum Safety and Strength

Compact and light in weight, these Henry Wing Cap Valves give you maximum strength and safety under all conditions of service. Available in non-ferrous alloy with solder connections; in semi-steel with F. P. T. connections; and in semi-steel with companion flanges, bolts and gaskets—with brass tail-pieces for freon and steel tail-pieces for ammonia or freon. Size range:  $\frac{1}{2}$ " to  $5\frac{1}{8}$ " OD solder connections;  $\frac{1}{2}$ " to 8" F. P. T. or steel weld connections.

## Patented Non-Rotating Valve Stem

Replaceable non-rotating stem disc has soft metal alloy insert which seats easily in valve body. Disc is self-aligning and chatter-proof. All valves are back-seating and may be repacked under pressure, if necessary.



SOLD BY LEADING WHOLESALERS

### LIST OF PARTS

1. Stem Packing
2. Back Seat
3. Spring makes self-aligning disc chatter-proof.
4. Spring Retaining Ring for locking pins.
5. Locking Pins
6. Non-rotating stem disc with replaceable soft metal alloy insert.

Valves, Driers, Strainers, Control Devices  
and Accessories for Refrigeration  
and Air Conditioning and  
Industrial Applications.



# HENRY VALVE CO.

Melrose Park, Ill. (Chicago Suburb)

Cable: HEVALCO, MELROSE PARK, ILLINOIS

JUNE, 1949 • COMMERCIAL REFRIGERATION



## LETTERS

### New Name Stresses Scope of Magazine

EDITOR:

You are to be congratulated on your new name. I agree with you that it will more clearly identify your publication with the broad scope of air conditioning and commercial refrigeration which is definitely foremost in a majority of the distributors and dealers buying today.—C. M. Hatcher, Baker Refrigeration Corp., South Windham, Me.

### Kind Words for the Handbook

EDITOR:

I just received my copy of the **COMMERCIAL REFRIGERATION and AIR CONDITIONING MARKETING HANDBOOK 1949-1950**.

This in my opinion is the finest presentation I have seen since I have been in the business and you are to be congratulated on a swell job done.—J. M. Oberc, J. M. Oberc, Inc., Highland Park, Mich.

EDITOR:

We have recently received the **COMMERCIAL REFRIGERATION and AIR CONDITIONING MARKETING HANDBOOK (1949-50)**.

This is a remarkable book from many aspects, and I would like to know what the price would be for, let's say, 10 or 15 copies, as it is quite possible we may want to distribute them to various members in our organization so they may "dog-eat" the book at their convenience.—Maurice Zatko, export manager, Fogel Refrigerator Co., Philadelphia, Pa.

EDITOR:

One of your representatives was in to see me recently and showed me a copy of the **COMMERCIAL REFRIGERATION HANDBOOK**. I was very much impressed with this book and would like to obtain a copy.—E. C. Robinson, advertising manager, White-Rodgers Electric Co., St. Louis, Mo.

EDITOR:

I received yesterday the sample copy of the **MARKETING HANDBOOK**. This is certainly a very ambitious venture and will, no doubt, be useful to numerous people in the industry.—W. J. Aulsebrook, assistant to the general manager, Servel, Inc., Evansville, Ind.

EDITOR:

... We think the **HANDBOOK** is very well done.—E. A. Vallee, executive vice president, Automatic Products Co., Milwaukee, Wis.

Copies of the **HANDBOOK** are available at a price of \$5 each. Order on your own business letterhead or use the convenient coupon on page 85 of this issue.

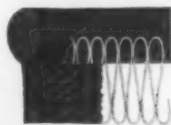


Because most materials become as brittle as glass when exposed to —110° F., Pure Carbonic Inc. experienced difficulty in securely sealing the doors of refrigerator cars that transport "Dry-Ice." Losses due to evaporation through leaky doorways often ran as high as 35%. Then Inner-seal was tried.



A Pure Carbonic Inc. refrigerator car, specially designed for transporting "Dry-Ice."

It remained soft and flexible in spite of the intense cold. The resilient neoprene-coated sponge rubber bead made a tight, contour-conforming seal. Doorway evaporation losses dropped to approximately 3%, and the savings realized quickly paid for the Inner-seal installation. Unique in design, easy to install, Bridgeport Inner-seal is the strongest, most flexible weather stripping for industrial applications. It is manufactured in many standard sizes and colors or may be specially designed for unusual applications. It will pay you to get the cold facts on Inner-seal. Write today for data sheet giving complete information.



Tough spring steel wire molded for life into live sponge rubber coated for this application with neoprene that resists sun, oil, and extreme temperature variations.

**Bridgeport**  
**FABRICS, INC.**  
BRIDGEPORT 1, CONN.  
Est. 1837



**SOLD BY LEADING REFRIGERATION WHOLESALERS...EVERYWHERE**



# ANSUL REFRIGERANTS

## *The Quality Standards of the Industry*

ANSUL WHOLESALE-  
SALERS are ready  
and equipped to ren-  
der an intelligent, co-  
operative service to  
refrigeration service  
engineers on prob-  
lems which arise,  
from time-to-time, in  
the operation of re-  
frigerating systems.

ANSUL REFRIGERANTS are the undisputed quality standards of the Refrigeration Industry . . . and this enviable recognition is protected and maintained by strict laboratory control of every step in the manufacture of Ansul Sulfur Dioxide and Ansul Methyl Chloride.

Every cylinder of Ansul refrigerants is individually analyzed and carefully inspected to safeguard the rigid standards of purity and dryness and to insure maximum safety in handling.

For more than a *third of a century*, Ansul has both pioneered and led the field in the production of sulfur dioxide for refrigeration purposes. . . . Ansul methyl chloride has gained universal recognition in the industry for its unsurpassed quality.



## LETTERS

### Who Knows of a "Freeze-O-Matic" Unit?

EDITOR:

We would appreciate having the address of the company that makes the Freeze-O-Matic Junior Refrigerator.

If you can give us this information we would appreciate having it at your earliest convenience. Thanks.—W. P. King, King & Brown, Snyder, Tex.

In reply to your inquiry concerning the name of the company making a refrigerator under the name of "Freeze-O-Matic", the closest we can come to this in our file of information is a "FreezeAmatic" line of equipment made by Superior Refrigerator Mfg. Co., 1606 Pine St., St. Louis 3, Mo.

Products made under this name include bottle coolers, ice cream cabinets, home and farm freezers, and frozen food storage cases. If this is the type of equipment in which you are interested, this company may be the manufacturer.—Editor

### Ice Cube Makers Listed

EDITOR:

Who makes ice cube freezers suitable for hotel and cafe use—size 150 to 200 cubes, and storage space.—Irwin & Cornelson, Red Oak, Iowa.

In response to your inquiry we submit the following: Sub-Zero Freezer Co., Madison 5, Wis.; Evans Mfg. Corp., Mt. Vernon, N. Y.; United Refrigerator Co., St. Paul, Minn.; Bush Mfg. Co., West Hartford 6, Conn.; Fogel Refrigerator Co., Philadelphia, Pa.; La Crosse Cooler Co., La Crosse, Wis.; American Refrigerator Co., Minneapolis 8, Minn.; Peerless of America, Inc., Chicago 25, Ill.; Northwest Equipment Co., Minneapolis 8, Minn.; Stoddard Mfg. Co. Inc., Mason City, Iowa.

A complete list of manufacturers of this and other types of commercial refrigeration and air conditioning equipment is contained in the **COMMERCIAL REFRIGERATION AND AIR CONDITIONING MARKETING HANDBOOK** now available from Manufacturers Directory Co., 1240 Ontario St., Cleveland 13, Ohio, at a price of \$5.

### Io Voglio Compare

EDITOR:

Pregasi comunicare condizioni di abbonamento.—Ditta Pietro Sanvito, Frigorifero Verbano, Via Voldomino, Luino, Varese, Italia.

In response to your recent inquiry on the rate of our magazine, **COMMERCIAL REFRIGERATION AND AIR CONDITIONING**, the foreign subscription price is \$5.00 per year.

### No Independents Make Hermetic Replacements

EDITOR:

Please advise if there is a factory which makes replacement units for real-unit refrigerators, other than the original factory. —T. B. Atkins, Big Spring Hardware Co., Big Springs, Texas.

We regret that so far as we know replacement units of the hermetically sealed type are not available through any source other than the original manufacturer. We know of a couple of concerns who are rebuilding hermetic units but they do this only on order for individual dealers, and do not have them for sale separately.

The use of hermetic units in various types of refrigeration equipment is expanding very rapidly but so far it hasn't grown to the point where any one manufacturer has found it profitable to go into the business on an independent basis.

All other things being equal, your best bet—both from your own standpoint and that of the customer—is to go along with the same type of unit that was originally installed in the refrigerator.

### Dairy Seeks Source Of Coin Meters

EDITOR:

Where can the coin meter devices be had as told in your story "Slot Machine" Selling?—J. Harbert, Supreme Dairy Co., Alliance, Ohio.

We have just received your inquiry concerning the availability of the coin meter devices described in the story entitled "Slot Machine" Selling, which was published in the October 1948 issue of our magazine.

These coin meters to which you refer are manufactured by International Register Co., 2620 W. Washington St., Chicago 12, Ill., and I am sure that an inquiry addressed to Mr. H. H. Rosenheim at that address will receive prompt attention.

# NO TIME LOST!

## INSULATED -

## JACKET

## CAPACITORS



• To save your time and effort. Aerovox motor-capacitor replacements come with insulated jackets. Here's the popular drawn-can Type MSF. Used in or out of its handy box jacket. Likewise with the round-can units in their insulated tube jackets. If still better protection is desired, Aerovox has the necessary hardware — metal casings, end caps, mounting brackets.

Remember, Aerovox maintains a complete line of Universal and Exact-Duplicate Capacitors to meet all replacement needs. And our distributor maintains a representative stock for your convenience. • Ask for latest literature — or write us.



### FOR RADIO-ELECTRONIC AND INDUSTRIAL APPLICATIONS

**AEROVOX CORP., NEW BEDFORD, MASS., U.S.A.**  
Export: 13 E. 40th St., New York 16, N.Y. • Cable: "ARLAB"  
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# YOU GET real sales backing

WHEN YOU SELL **G-E** CONDENSING UNITS

**G-E READY-MADE MERCHANDISING**  
for Commercial Refrigeration dealers and service engineers

**sales promotion**  
...direct mail to get you inquiries and prospects.

**sales training**  
...literature to help you know your product.

**sales tools**  
...quick selection book, catalogs to help you close sales.

**MAIL  
THIS COUPON  
TODAY!**

## GENERAL ELECTRIC COMPANY

Air Conditioning Department, Section CR-16,  
Bloomfield, New Jersey

I am a service engineer ☐ dealer ☐

As samples of G-E sales literature, please send me your condensed catalogs for condensing units and replacement parts. Please put me in touch with my local G-E wholesaler-parts depot.

NAME .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

**NEED HELP** in organizing a well-rounded, fast-moving condensing unit sales campaign *right now*? Want to *merchandise* condensing units—the modern way? You can get solid, practical help from the new G-E sales promotion material that's designed especially for commercial refrigeration dealers and service engineers. It's available now at your local General Electric wholesaler-parts depot.

**HERE'S REAL BACKING** for your selling. This new material can give even the smallest retailer a complete, professional sales program for G-E condensing units. It covers the most important phases of modern refrigeration equipment selling. Your wholesaler will be glad to explain the function of each piece. He can show you how to put your program to work...to help you sell more G-E condensing units.



## YOU'LL FIND IT'S EASIER TO SELL

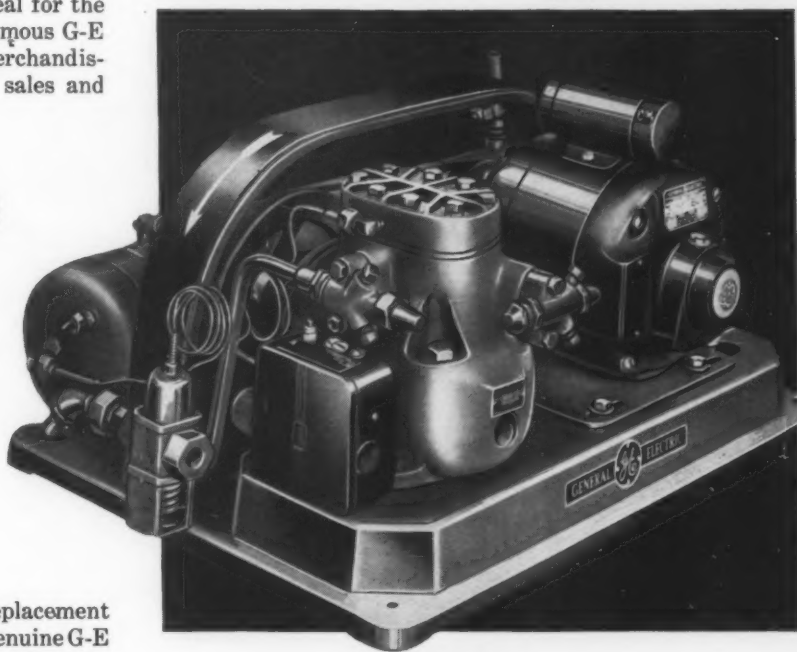
condensing units that can boast G-E quality and dependability. Tops in customer acceptance, G-E condensing units deliver a big cooling job at extremely low cost. And you'll be amazed at G.E.'s low prices. General Electric refrigeration machines—both air-cooled or water-cooled models from  $\frac{1}{2}$  to 5 hp—are compact, easy to install, high capacity units, ideal for the replacement market. Team up famous G-E condensing units with modern merchandising methods... and watch your sales and profits go up!

## GET YOUR SHARE OF THE G-E SERVICE AND PARTS BUSINESS

More than a million  
G-E commercial-size  
condensing units  
have been built!

Under the new General Electric Replacement Parts Depot system, you can get genuine G-E replacement parts quickly and easily anywhere in the country. That means increased profits for *you*... because you'll be able to get your share of the G-E service and parts business. More than a million G-E commercial-type refrigeration machines have been built! You'll be able to give quick service and waste little time or motion... because of the simple General Electric replacement policy. It means less trouble for you... more satisfaction for your customers!

here's your greatest  
sales tool



## CONDENSING UNITS

*—for dependable, economical commercial refrigeration*

**GENERAL**  **ELECTRIC**

# 49 FAST ANSWERS TO 49 EMERGENCIES

## Refrigeration V-Belts in a Portable Assortment

The 49 V-Belts in greatest demand by Refrigeration Service Men have been selected for this U. S. Rainbow V-Belt assortment.

With this compact stock you can be ready with the exact belt needed. These 49 cover service on hundreds of domestic and commercial refrigeration units, ice-cream machines, frozen-food plants, air-conditioning systems and other allied equipment.

Each belt has the unique Equa-Tensil Cord Section—the U. S. Rubber development which provides great pull and endurance.

Order from your Jobber, or for more information write Mechanical Goods Division, United States Rubber Company, 1230 Avenue of the Americas, New York 20, N. Y.

## U. S. RAINBOW—The V-BELT With The Equa-Tensil Cord Section



The compactness of the 8-hook panel enables you to keep the 49 belts right where you need them—in your truck—in your repair shop.

A PRODUCT OF

**U.S. RUBBER**  
SERVING THROUGH SCIENCE

UNITED STATES  
RUBBER COMPANY

# You'll be **SAFE** ALL-ways...



*if you have . . .*

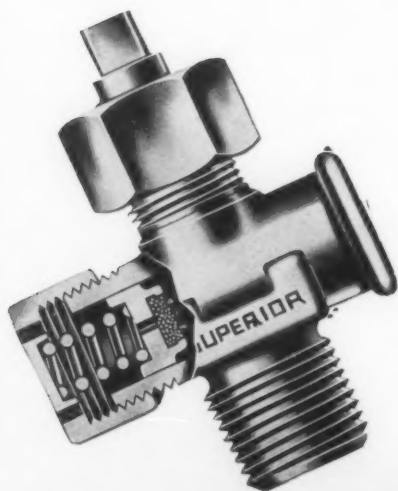
## THE New SUPERIOR Type 1281 Valve on your service cylinders

Here's another SUPERIOR "First"—a small service cylinder valve, incorporating a spring-loaded safety device—set to relieve excessive pressures caused by *heat or overfilling*—reseals at normal pressures, saving refrigerant and reducing hazard.

Recommended for 5 and 10 pound cylinders, for use with any type of refrigerant.

Why not specify SUPERIOR type 1281 valves when you order service cylinders from your Wholesaler . . . and be sure to use them for all replacements. You'll be **SAFE** all-ways!

**Ask your Wholesaler for further details**



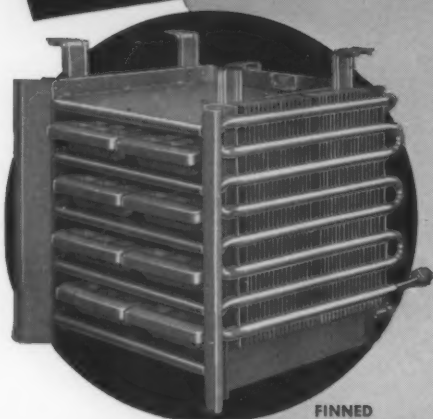
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# Superior Valve and Fittings Co.

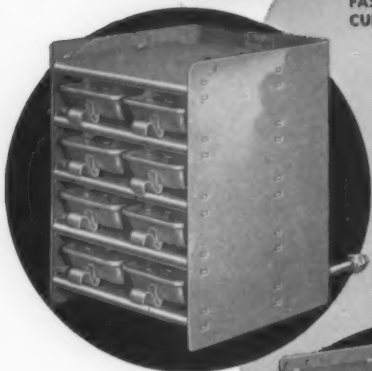
1509 WEST LIBERTY AVE., PITTSBURGH 26, PENNA.



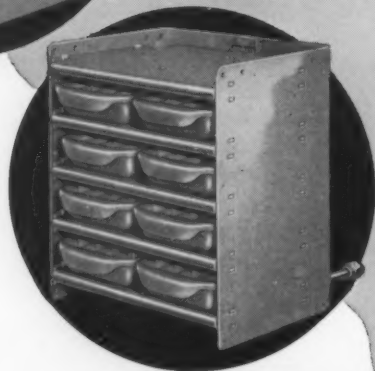
# *For fast production...* Peerless **FASTERFREEZE** cube makers



FINNED  
FASTERFREEZE  
CUBE MAKER



SNAP-OUT  
CUBE MAKER

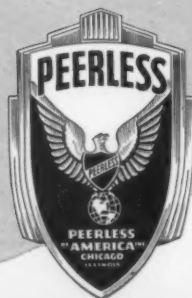


NORMAL DUTY  
CUBE MAKER

● Continuous refrigerant tubes in each shelf of a Peerless FASTERFREEZE Cube Maker insure quick production of ice cubes in quantity for back-bars, reach-in boxes, soda fountains, etc. Ideal for restaurants, hotels, hospitals and other institutions. All models are constructed of heavy aluminum, with copper tubes for use with Freon, Methyl or Sulphur Dioxide, aluminum tubes for Ammonia. There is a wide range of sizes and capacities. Snap-Out FASTERFREEZE Cube Makers have levers integral with each grid which instantly free full-sized cubes, by the tray if desired. The Peerless Finned FASTERFREEZE Cube Maker combines fin coil surface and cube freezing in a single balanced unit, with a wide selection of coil surface and cube capacities. Coils have non-soldered return bends with decorative covering on front of unit.

*Send for Circular on  
Specifications and Prices*

**PEERLESS of AMERICA, Inc.**  
2901 LAWRENCE AVE., CHICAGO 25, ILLINOIS, U.S.A.







SELECTED FOR  
THE AMAZING NEW TERRACE PLAZA HOTEL

# NIBCO

## COPPER TUBE FITTINGS and COPPER DRAINAGE FITTINGS



### TERRACE PLAZA HOTEL

Skidmore, Owings & Merrill; Architects — Jaros, Baum & Bolles; Engineers — Frank Messer & Sons, Inc., Cincinnati; General Contractors — E. J. Nolan Corporation, Cincinnati; Plumbing & Heating Contractors — Carrier Corporation; Air Conditioning & Refrigeration — Mutual Mfg. & Supply Co., Cincinnati; Wholesale Distributor.

"Nothing but the best," was the rigid rule when the new Terrace Plaza in Cincinnati was planned. The most advanced ideas in structure and service facilities, the finest embodiment of those ideas in materials and equipment—these were the policies of the builders of this most modern hotel in the country.

That's why it means so much that Nibco fittings with copper tube were used throughout—for the heating, air conditioning and water lines and for the copper drainage fittings. Nibco fittings in sizes up to 6 inches were installed in this job by the E. J. Nolan Corporation and the Carrier Corporation, and were supplied by the Mutual Manufacturing and Supply Co., Nibco distributors in Cincinnati.

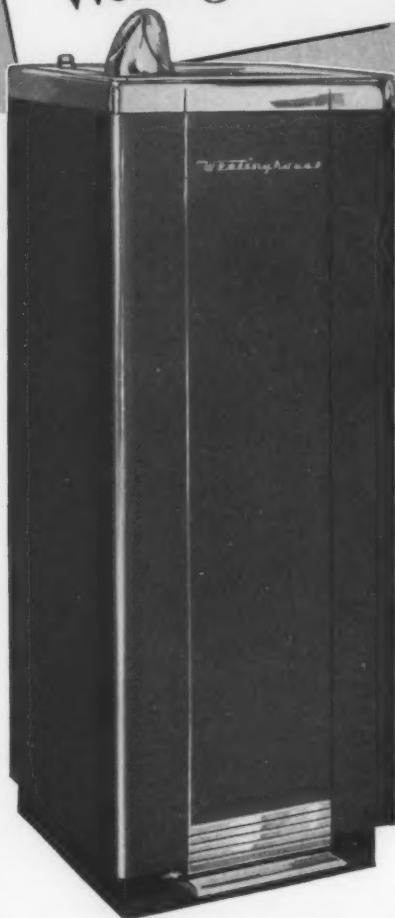
Over 7 miles of piping were required for the system which heats—and cools—the hotel, with individual controls in every room. Materials throughout were chosen to cut maintenance costs to the bone. Nibco fittings were chosen for quality first, and for completeness of the line to meet all needs.

For every job—large or small—it will pay you to standardize on Nibco fittings. They help speed the job and insure customer satisfaction.

NORTHERN INDIANA BRASS COMPANY,

614 PLUM STREET, ELKHART, INDIANA

YOU CAN BE SURE  
..IF IT'S  
Westinghouse



SELL THE LEADER...  
SELL WESTINGHOUSE!

The Cooler with the  
AUTOMATIC STREAM-HEIGHT CONTROL



"of course,  
it's electric"

THIS CAN'T HAPPEN  
with a Westinghouse Water Cooler!

*Nix on a shower bath!* The Westinghouse Automatic Stream Height Regulator holds the water flow constant, regardless of variations in local water pressure . . . a standard feature on all pressure coolers. But this is only one reason why Westinghouse is the *fastest selling* Water Cooler line.

In addition, Westinghouse gives you a Stainless Steel Top, a convenient Foot Pedal Control, an Anti-Squirt Bubbler and a Push Button Bubbler Kit\* . . . PLUS the famous Westinghouse 5-Year Guarantee Plan on the Hermetically-Sealed System. Point for point, you'll see why Westinghouse is the *Leader* line . . . a capacity and type for every need.

**WESTINGHOUSE ELECTRIC CORPORATION**

Appliance Division • Springfield, Mass.

\*Available at slight additional cost.

FOR FURTHER INFORMATION CALL YOUR  
WESTINGHOUSE DISTRIBUTOR OR MAIL  
THE ATTACHED COUPON TO  
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INFORMATION**

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Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

WESTINGHOUSE ELECTRIC CORPORATION  
Appliance Division • Springfield, Mass.  
6CRAC

**BUILT RIGHT..PRICED RIGHT..AMAZINGLY FREE FROM SERVICE**

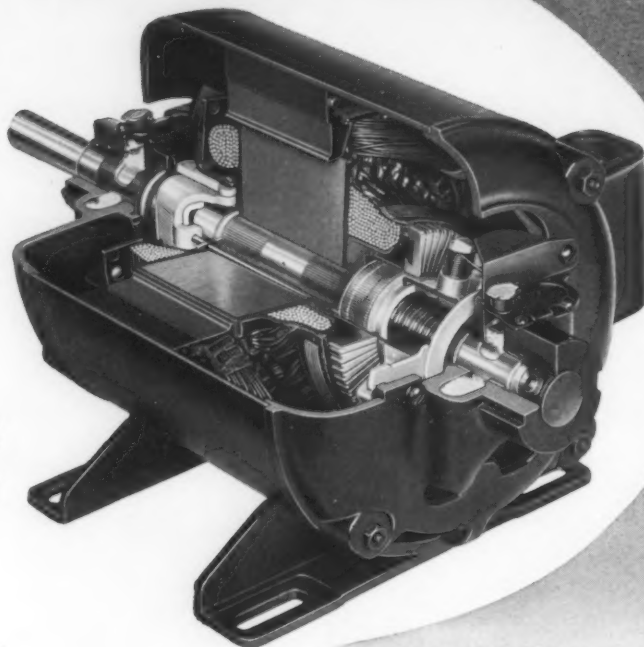
# for Dependable—Versatile— Troublefree Performance

choose this  
two-in-one  
Motor...

the famous

**Wagner**

**Repulsion-Start  
Induction Motor**



The Wagner type RA repulsion-start induction motor is widely known as the "general purpose motor" of the single-phase motor field. Its electrical characteristics combine the best features of two types of motors: the repulsion motor during the starting period, and the induction motor while running at rated operating speeds.

This versatile motor is not only exceptionally well-suited for use on practically *every* type of motor-driven appliance and machine normally utilizing single-phase current, but is also the *only* choice for a wide variety of applications because of its low upkeep cost, minimum servicing, freedom from vibration and noise, and years of reliable service.

If you need motors that will build *real* customer satisfaction, choose Wagner Motors. The complete line covers a wide range of types and sizes for every application.

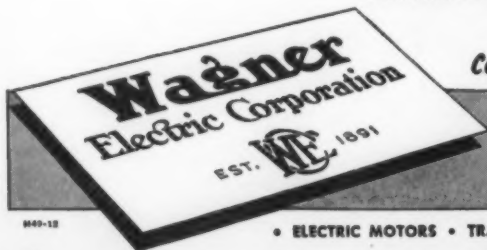
#### Buyers of Wagner Motors Get Nationwide Service!

More than 450 Wagner Authorized Electrical Service Stations and Parts Distributors augmented by 25 Wagner-owned Service Branches are ready to immediately supply on-the-spot service, factory guaranteed exchange motors, or genuine Wagner Parts. Write for Bulletin MU-24 for complete list.

Bulletins on the complete line of Wagner Motors are also available.

#### Wagner Electric Corporation

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*Consult Wagner Engineers on all Electric Motor Problems*



• ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES • AUTOMOTIVE BRAKE PRODUCTS •

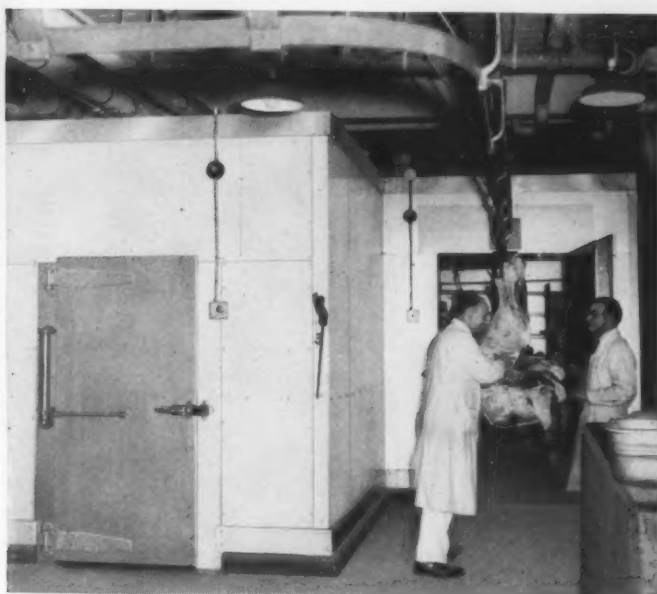
**JUNE, 1949 • COMMERCIAL REFRIGERATION**



# "Gold Bond Zerocel stands up Best in Service!"

*Says NEW ENGLAND CONTRACTOR,*

*Charles W. Brockunier, President, Cork Engineering and Insulation Co., Inc.*



ONE of Boston's leading contractors tells us that he has recently installed five Zerocel insulated walk-in coolers and one walk-in freezer (above, right) in one of the newest and finest super markets in New England. He has found that Zerocel offers the highest efficiency at the lowest cost—claims it's the best insulation "buy" of our day.

Every day, owners and builders throughout the Refrigeration Industry are specifying clean, easy-to-install Zerocel insulation (above, left). It's economical, gives perfect insulation performance, and it's *fireproof*! For complete details, send for your copy of this free booklet today!

**NATIONAL GYPSUM COMPANY**  
BUFFALO 2, N. Y.

**SEND FOR FREE BOOKLET TODAY!**

- Efficient, "K" factor of 0.24 BTU at 60°F.
- Fireproof
- Will not absorb moisture
- Odorless
- Will not settle
- Immune to fungus, rot and decay
- Easier application

**GOLD BOND  
ZEROCEL  
INSULATION**



National Gypsum Co., Dept. I-96, Buffalo 2, N. Y.

Gentlemen: Please send me a FREE copy of the new Gold Bond Zerocel Booklet, "Fireproof Refrigeration Construction."

Name .....

Company .....

Street .....

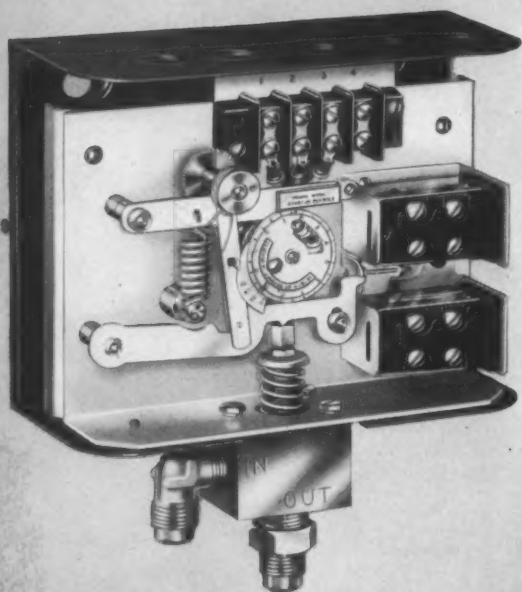
City..... State.....

THERE'S A BIG MARKET FOR

# Fast...Automatic Defrosting

NOW PROVIDED BY THE NEW **PENN SERIES 321**

## HOT GAS DEFROSTER



**SAVES TIME**

**SAVES FOOD**

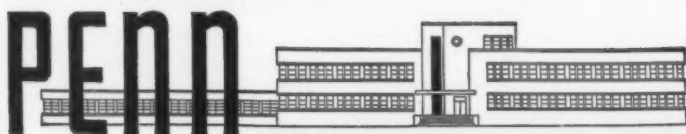
**SAVES TROUBLE**

**PROTECTS PROFITS**

Everywhere you find frost on evaporator coils you'll find a prospect for automatic defrosting. On low temperature boxes and on installations held at intermediate temperatures near freezing and below, as well as on thermostatically controlled refrigeration above freezing, the Penn Series 321 Automatic Hot Gas Defroster is a "natural."

It's positive in operation. The heavily spring-loaded valve seats securely and avoids hum or chatter. And this sure operation is not affected by low voltages. Because this is a single-unit control, it's easy to install. It has the rugged Penn construction with 2-pole switches and when you install it you know it will work *dependably*, save "fix-it" calls and protect your profit.

The Penn Series 321 Automatic Hot Gas Defroster is going over fast! Get your share of this big new market. See your jobber or write for full information. **Penn Electric Switch Co., Goshen, Indiana.** Export Division: 13 East 40th Street, New York 16, New York, U. S. A. In Canada: Penn Controls Ltd., Toronto, Ontario.



**AUTOMATIC CONTROLS**

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES



## *Gold Brick . . .* **OR THE REAL THING?**

**I**F A cracking good salesman with a topflight product is up against a competitor with shoddy goods and a wide reputation as a sidwinding liar, what does he do? Go home and lie down . . . or get out and sell circles around the bird?

You guessed it the first time!

Well, you good salesmen of America and the "American Way", we've been having too long a siesta . . . and during our complacent dreaming the Red Comrades have been peddling their tattered and damaged goods to a lot of our prospects. With word magic and a lot of sinister hocus pocus they have half-convinced a lot of folks . . . too many of them.

Have we got something good? Boy, **HAVE WE!** Does it work for the benefit of all? Can an ordinary fellow use it in his climb to better things? Does it give the individual the incentive to go places? What about service . . . is it guaranteed?

If you've got good answers to those questions, your sales manager, Uncle Sam, needs you out on the road pouring that sales story into every open ear you can find. There may come a time when we can use restrained selling again, but **NOT NOW.**

Let's load ourselves up with selling ammunition come Flag Day. Let's go out with the original and only genuine brand of 100% American stuff. Let's lick the guy in the pink suit and the Red tie . . . and win this contest of selling ideas . . . with ingenuity, eloquence, conviction and **UNSHAK-  
ABLE LOYALTY.**

# demand **DETROIT CERTIFIED VALVES and CONTROLS**

**Extra value  
in the product**

**means extra profits in your pocket**

You get the advantages of a lot of extras when you use **DETROIT** Certified Valves and Controls: extra ease and flexibility in ordering—**DETROIT** has the most complete line of valves and controls and the largest distributing organization in the field. Extra dependability for every installation—**DETROIT** Certified Valves and Controls are designed and built to deliver many years of top performance.

In addition, **DETROIT** backs you up solidly by certifying every control—extra protection for you, your work and your reputation. On your next job get all of these extras; install **DETROIT** Certified Valves and Controls.

#### **No. 673 Thermostatic Expansion Valve**

For use on commercial refrigeration systems. Double bellows construction allows a broad range of superheat settings which remain constant under varying conditions. Gas charged for motor overload protection and quick response. "The Standard of the Industry." Write for Bulletin No. 82.



# DETROIT

**LUBRICATOR COMPANY**

5900 TRUMBULL AVE., DETROIT 8, MICHIGAN

Division of **AMERICAN RADIATOR & Standard Sanitary** CORPORATION

CANADIAN REPRESENTATIVE: RAILWAY & ENGINEERING SPECIALTIES, LTD. — MONTREAL, TORONTO, WINNIPEG



**DETROIT** HEATING AND REFRIGERATION CONTROLS •  
ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL  
BURNER EQUIPMENT • **DETROIT** EXPANSION VALVES  
AND REFRIGERATION ACCESSORIES • STATIONARY  
AND LOCOMOTIVE LUBRICATORS

*Serving home and industry* AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TOMAWANDA IRON



# BTU

## News • Laws • Trends

### Industry Pioneer Honored

**D**R. WILLIS H. CARRIER, chairman emeritus of Carrier Corp., was honored at a testimonial dinner in Syracuse recently by the North American Branch of the Newcomen Society of England as "the Father of Air Conditioning." Leaders of finance, industry, commerce and science from various parts of the U. S. and Canada were in attendance. Newcomen is an honorary society which honors persons who have contributed, or are contributing, to the material progress of mankind. Others who have been recognized by Newcomen in recent years include Thomas Edison, Cyrus H. K. Curtis, J. J. Bausch, John D. Rockefeller, Sr., and Daniel Willard.

### Choosy Fruit Picker

**A**N ELECTRIC eye that chooses and rejects fruits and vegetables for freezing is among the new mechanical developments for the frozen food industry. The electronic sorter scans 60 items a second and rejects fruit and vegetables of non-uniform color—differences which are imperceptible to the human eye.

### Selling U. S. Cooling to the World

**W**ITH the release of a 14-page color brochure, "To Your Health", manufacturers of commercial and industrial refrigerating machinery have opened a promotional campaign designed to convince foreign governments that refrigeration is essential to a nation's health, economic security, and progress. Planned and sponsored by the foreign trade committee of ACRMA, the educational effort will be continued for several years.

Profusely illustrated and with a minimum of text, the brochure makes the points that refrigeration is a necessity, saves time and money, creates wealth, promotes national growth, speeds industrialization, spurs progress, and builds security. The booklet states that "the annual destruction of food, from improper storage alone, amounts to 18 billion tons—enough to feed a nation of 48 million people for a year". Probably many times that amount of unstored food is lost annually through spoilage.

A principal aim of the booklet is to convince foreign governments that refrigeration is not a "luxury item". Overseas distribution of the booklet is being made through representatives of ACRMA-member companies.

### Figures Tell Story of Industry Growth

**M**ANUFACTURERS in the refrigeration machinery industry showed a value added by manufacture during 1947 of \$597.5 million, an increase of 306% over the \$147 million shown in 1939, according to preliminary figures released by the Bureau of the Census, Department of Commerce. Value added by manufacture is calculated by subtracting cost of materials, supplies, containers, fuel, purchased electric energy, and contract work from the value of products. For comparing one industry with another, it is the most satisfactory Census measure of the economic importance of an industry.

Average number of production and related workers in the industry amounted to 108,316 in 1947 as compared with 39,433 in 1939. Wages paid to production workers increased 447%, from \$54.7 million in 1939 to \$299.2 in 1947. The industry's expenditures for new plant and equipment during 1947 totaled \$46.1 million.

### Plastic Foam Used As Insulation

**A** NEW plastic foam insulating material that expands to 100 times its original volume when baked has been developed at the Westinghouse research laboratories in East Pittsburgh. Lighter than some gases, the new material weighs from 10 to 20 times less than the meringue in a pie. It is resistant to fire, moisture, fungus growth, and insects, and is said to be low enough in cost to be practical for many applications.

The foam, reddish brown in color and with a sponge-like appearance, is made by heating a molasses-like synthetic resin at about 350 F until it expands to 100 times its original volume and then solidifies. One advantage claimed for the new material is that it can be shipped to the point of use in liquid form and then foamed into place.

It is being considered for use in insulating soft-drink coolers, and tests are being made to determine whether it can be applied to household refrigerators.

### Sell Them While They Wait

**I**N AN unusual reverse twist that "sells the sellers," Frigidaire has built a new reception room at its Dayton, Ohio, general offices that utilizes the twin selling aids of air conditioning and modern design to create good will among plant visitors. The new room offers visitors an opportunity to learn about the refrigerators, air conditioners, commercial refrigerators, and other products made by the company—and to study them in leisurely comfort.

Overall scheme resembles a dealer's showroom, with the basic idea following the "selling stations" designed for dealers' use by Raymond Loewy. One section of the room is devoted to representative commercial refrigeration and air conditioning products, including an ice cream cabinet, reach-in refrigerator, beverage cooler, and meat display case. Literature on the products is provided in a rack recessed into one wall. The room is air conditioned by a 20-ton Frigidaire system.

# TWO GREAT NEW LARKIN UNITS

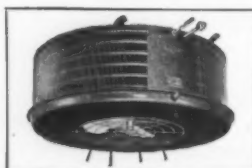


## THE TURRET HUMI-TEMP

FOR CEILING INSTALLATION  
IN WALK-IN COOLERS  
AND STORAGE ROOMS

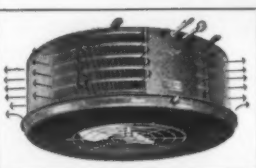
## THE HALF-TURRET HUMI-TEMP

FITS FLUSH AGAINST WALL  
IN WALK-IN COOLERS  
AND STORAGE ROOMS



DRAWS AIR IN AT BOTTOM

The quiet-running, slow-speed fan draws in air at the bottom and forces it across and through the big Larkin Cross-Fin Coil. 100% of coil surface is used. Fits flush to ceiling, saves valuable space.



FORCES AIR IN ALL DIRECTIONS

Scientifically designed air diffuser assures uniform distribution of cold air. Entire coil surface is used — no dead spots. No difference in air flow from top of coil to bottom, maximum efficiency.

FOR ALL-ROUND temperature and humidity control with maximum space-saving, these new Larkin units are ideal. Feature packed for faster sales!

- Exclusive venturi lip on drip pan prevents short circuiting of cold air
- Light-weight, rust-proof aluminum case, finished in Larkin Blue or gleaming White
- Built-in Heat Exchanger
- Hinged grill easily removed for quick access to motor and valve
- Original, patented Larkin Cross-Fin Coil
- Vibration-proof fasteners; heavy mounting brackets, die stamped
- Largest models less than 13 inches high

See your wholesaler, or write to us today for full details and prices on these new Larkin Humi-Temps.

# LARKIN



# COILS

319 MEMORIAL DRIVE, S.E.  
ATLANTA, GEORGIA

ORIGINATORS OF  
THE CROSS-FIN COIL

A hospital visitor smiles with pleasure as he selects a bouquet of flowers from the refrigerated self-service case in the hospital lobby. The nurse agrees that this floral offering will help cheer the patient who receives it.



## HERE'S HOW TO SELL . . .

# More Floral Cases

**Boost your florist's business—and your own—by selling him some refrigerated cases for merchandising bouquets of flowers to visitors in hospital lobbies**

SO what if your local florist already does have a refrigerated floral display case in his shop? You can still sell him another one or more if only you can convince him of the wisdom of broadening his activities by following the profitable pattern set by Steddum's Flower Shop in Washington, D. C.

Briefly, florist W. V. Steddum's idea (which he borrowed from a friend in Phoenix, Arizona) is this: he buys a self-contained refrigerated floral display case, installs it in the lobby of a hospital, and there uses it

as a self-service unit for merchandising floral bouquets to hospital visitors.

Steddum's shop services the case daily with fresh flowers. Visitors select their own bouquets and pay the predetermined price to the hospital cashier. The hospital deducts a flat 20% commission from the sale price and passes the balance along to Steddum.

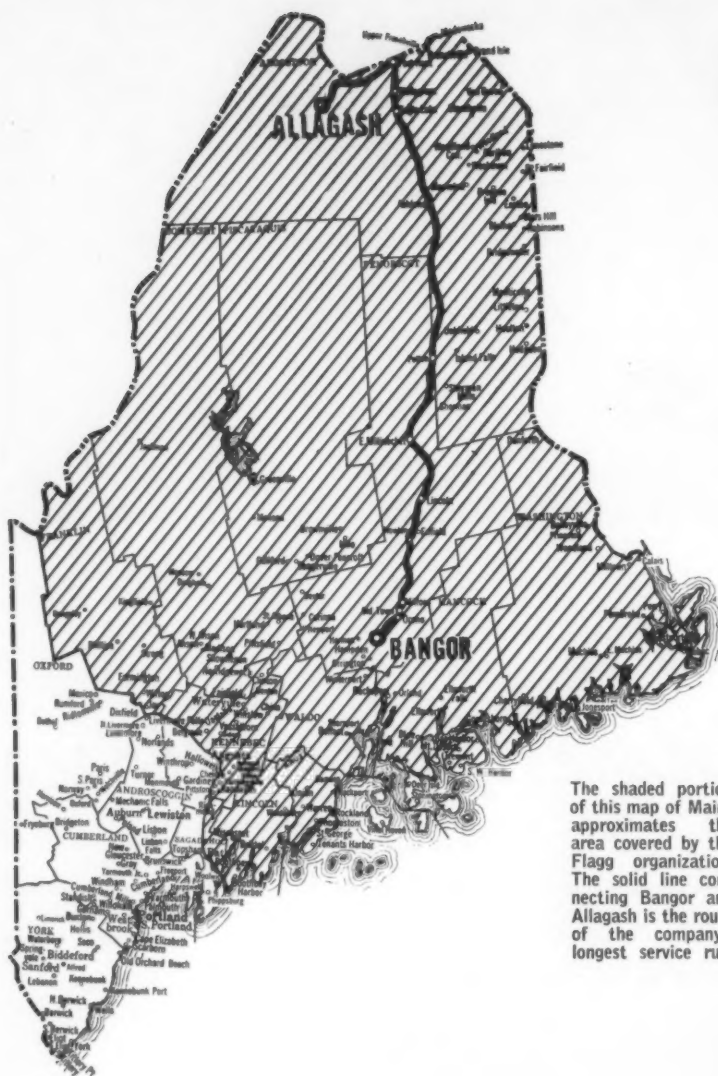
Thus, the installation of such a florist case touches off a chain reaction of pleasure and profit: the hospital patients are cheered by the

gifts of flowers; visitors are pleased at the convenience of being able to purchase these flowers right on the spot; the hospital is more than satisfied because the colorful floral displays visible through the glass doors of the case serve to brighten up the lobby, and also because each bouquet sold adds that much more to the institution's revenues; the florist is delighted because through this promotional scheme he sells plenty of posies; and—most important of all from our standpoint—some refrigeration firm is happy because it has found a market for another piece of commercial cooling equipment.

To date, Steddum operates these floral merchandising units in Emergency, Garfield, Alexandria, and Arlington hospitals, all located in Washington, D. C., or the nearby Virginia area. All cases are completely self-contained, providing for

*Continued on page 55*

# It's A



The shaded portion of this map of Maine approximates the area covered by the Flagg organization. The solid line connecting Bangor and Allagash is the route of the company's longest service run.

From Bangor to the little backwoods community of Allagash it's a 273-mile haul clear up to the top of the state of Maine. Much of this drive is over unpaved wilderness roads running through vast stretches of heavily timbered and sparsely populated country. But a trip like this is a routine matter to Rosco Flagg and his servicemen

NO DOUBT the average serviceman would simply hang up, crawl wearily back into bed, and figure that it was all just a horrible dream if his phone should ring in the middle of the night with an emergency service call from a customer more than 200 miles away. But to Rosco Flagg and his men such calls are so commonplace that they merely shrug their shoulders, pull on their clothes, and head their service trucks out over some lonely stretch of wilderness road.

From its headquarters in Bangor, Maine, the R. M. Flagg Co. fans its cooling and heating contracting activities out over the entire northeastern tip of these United States, working south as far as Bath and Augusta, east to the Atlantic coast, and west and north to the Quebec and New Brunswick borders.

The speedometer on a Flagg service truck will spin off a full 273 miles from the time the truck leaves the company's shop until it reaches the firm's furthestmost customer in the little northwoods camp of Allagash, where the roads—almost literally—run out and stop. Yet a Flagg serviceman will start out on a service call to Allagash just as quickly as he would on a call to a taproom just around the corner from the company's Bangor headquarters. That's the basis on which Rosco M. Flagg has built his somewhat unusual business.

Flagg's servicemen regularly drive some 50,000 miles a year. This matter of distance looms even more important when you take into consideration the fact that much of this driving is over unpaved roads and through long stretches of sparsely inhabited



# Long Haul...

or completely unpopulated backwoods country. During the long winter months the assistance of the state highway department's snow removal equipment often is required before the service trucks can get through to the more remotely located customers.

Even though a great deal of the area covered by the Flagg organization constitutes the heart of Maine's famed "potato country", the firm's business (true to Maine tradition) is no "small potatoes". In fact, Rosco Flagg points proudly to a \$600,000 volume in 1947, 80% of which was in the refrigeration field, and reports an even higher figure with an increased percentage of refrigeration business for 1948.

Proof that no small part of this overall volume stems from the firm's "backwoods" customers is the fact that \$150,000 worth of Flagg's 1947

business originated in Aroostook County, the northernmost one in the state.

Somehow, in the hunting and fishing camps which are strung along the "Great Northern Road", in the logging camps and paper mills of the lumber country, in remote communities like Allagash and The Forks which consists of 25 houses along a two-mile stretch of road, on the potato farms of Aroostook County, and in the fisheries of eastern seaboard, Rosco Flagg manages to find a goodly number of customers for the equipment which he sells.

This equipment covers a wide range of products, including refrigeration units for food preservation, for the chilling of both draft and bottled beer, for milk cooling, and for fish freezing. Farm freezers are proving to be an increasingly popular item in this territory. In addition, the



Rosco Flagg stands smilingly beside one of the service trucks which carry his men the length and breadth of the state of Maine.

company merchandises a full line of air conditioning and heating equipment and restaurant supplies.

Needless to say, the problems involved in handling trade throughout such a widespread area have necessitated the development of a good many new twists as well as the modification of countless old ones in the Flagg firm's sales and service techniques.

As it is presently set up, the company has 23 employees on its payroll, including eight refrigeration servicemen and three salesmen besides Rosco himself and his son, Guy, who shares

*Continued on page 69*

Rosco and his son, Guy, who serves as his father's "right hand man", examine a new piece of merchandise on the sales floor.



From this headquarters building, Flagg's sales and service representatives fan out over virtually the entire state of Maine.





Cargo high side equipment for refrigeration aboard the S. S. Lurline includes four 60-hp Carrier reciprocating compressors, two of which are shown above, with a total refrigeration capacity of 240 tons.

## PART 1

# modern marine refrigeration

**S. W. Brown**

Chief Engineer, Marine Dept.  
Carrier Corp.

**A comprehensive discussion of the practices and principles involved in the application of modern refrigeration equipment to commercial vessels**

**T**HE use of mechanical refrigeration for the preservation of food on shipboard was first introduced successfully in the 1880's on a ship of British Registry for the transportation of frozen beef. Today, practically every ocean-going vessel is equipped with a mechanical refrigeration plant.

The application of refrigeration introduced to the steamship owner a new source of income through the transportation of refrigerated cargo.

Considerable differences in practice exist, not only in each maritime nation, but also among companies engaged in the same trade. Until recently, no attempt had been made in

this country to standardize the application of mechanical refrigeration installation on shipboard. A proposed standard which has been in the making for the last three years is now awaiting final approval.

The following are among the reasons why marine refrigeration differs from shore practice:

1. The installation should be designed to function properly under conditions of roll and pitch to which a ship is normally subjected.
2. The equipment should be suitable to withstand normal usage under the corrosive effects of sea air and sea water.
3. The installation should be de-

signed to suit the physical arrangement of the ship.

4. The installation should be designed to operate through the complete range of climatic conditions through which the ship must travel and be capable of adjusting itself to sudden changes frequently encountered in the ambient sea water temperature.

5. Except in the case of a single-purpose vessel, such as a meat carrier or a banana ship, cargo refrigeration installations should be provided with refrigerating equipment capable of preserving cargo of every nature.

6. Since ships enroute cannot be easily serviced from land based planes, it is essential that the system be designed for uninterrupted operation during the voyage. Accordingly, stand-by plants or easily replaceable spare parts should be furnished.

7. In view of the high premium for cargo space, the equipment should be designed to occupy a minimum of space consistent with reliability and cost.

8. The equipment should be designed to conform with the applicable rules and regulations of various regulatory agencies such as the U. S. Coast Guard, the U. S. Public Health Service, the American Bureau of Shipping, Lloyd's Registry, U. S. Maritime Commission, American Institute of Electrical Engineers, and the U. S. Navy.

9. In addition to the above, in the case of Naval vessels, many stringent requirements must be complied with, such as shockproofness, which further complicates the design of marine refrigeration plants.

Marine refrigeration has two general classifications, (1) ships' stores, and (2) cargo refrigeration. Other applications such as fish freezing and

TABLE 2		
Ships' Stores—S.S. "Excalibur"		
SPACE	Gross Cu. Ft.	Temperature
Meat Outbound .....	1654	0°F
Meat Return .....	1090	0°F
Poultry .....	562	0°F
Frozen Food .....	540	0°F
Fish .....	577	0°F
Ice Cream .....	435	0°F
Butter and Shortening .....	772	15°F
Ice .....	175	20°F
Eggs, Cheese and Milk .....	1290	35°F
Potatoes .....	1070	35°F
Fruit and Vegetables .....	1560	35°F
Thaw .....	2640	45°F
Total Cu. Ft. (Gross) .....	12,365	

processing have not had enough installations as yet to justify a separate classification. This topic will be dealt with later.

### Ships' Stores

The ships' stores plant provides the refrigeration for the compartments containing the perishable foodstuffs required for the feeding of the crew and passengers during the voyage. Occasionally this plant also provides the refrigeration for icemakers, drinking water and galley-boxes.

Ships' stores compartments are subdivided to provide at least one high temperature and one low temperature. Table 1 shows the various compartments and temperatures provided on four classifications of U. S. Cargo Vessels and on Victory and Liberty Ships.

Valuable experience was gained

during World War II regarding the care of perishables in ships' stores. Serious spoilage of foodstuffs resulted in a directive being issued in the closing years of the war by the War Shipping Administration, requesting the reduction of box temperatures as follows:

Egg and cheese box (formerly dairy box): 30 to 31F., never below 30F.

Vegetable box: 32 to 34F.

Meat box: The temperature shall be set as low as possible (zero is recommended). Under no circumstances shall the temperature be held above 10F.

Fish box: The temperature shall be held as low as possible (zero is recommended). Under no circumstances shall the temperature be held over 10F.

All post-war vessels now specify lower temperatures. The recently converted S.S. "Excalibur", one of the "Four Aces", is provided with ships' stores compartments capable of maintaining zero F. Table 2 shows the ships' stores spaces and temperatures provided on this vessel.

### Ships' Stores High Side

Ships' stores plants are usually designed for direct expansion, Freon-12. A few installations on passenger vessels have employed brine circulation when equipped with cargo refrigeration also using brine.

With very few exceptions, Freon-12, motor driven, reciprocating com-

*Continued on page 52*

## TABLE 1

Temperatures — Degrees F

SPACE	C1 Vessel	C2 Vessel	C3 Vessel	C4 Vessel	Liberty	Victory
Meat .....	22 to 25	20	15 to 20	15 to 20	15 to 20	15
Fish .....	20 .....	..	15 to 20	.....	15 to 20	15
Veg. ....	35 to 40	40	42 to 45	40 to 45	40 to 45	..
Meat or Veg. ....	.....	..	.....	15 to 20	.....	..
Dairy .....	32 to 40	..	35 to 40	.....	30 to 35	35
Thaw .....	40 to 50	45	40 to 45	.....	.....	40

# CONTRACTORS

News • Activities • Plans

## Chattanooga Contractors To Seek Licensing Legislation

Air conditioning and refrigeration contractors in Chattanooga, Tenn., have opened a drive for the adoption of a new installation code and enforcement of existing state laws referring to unfair sales practices.

At a meeting April 19 at which Ed Wright, past president of NARC, was the principal speaker and prominent city officials were guests, members of the Refrigeration Contractors Association of Chattanooga laid plans for the proposed city code and also announced that a statewide convention of refrigeration and air conditioning contractors would be held in the near future.

### Safe Practices Needed

Stressing the importance of safe refrigeration installation practices as "among the most important matters now facing the public over the United States," Wright declared that in his recent travels throughout the country he has seen many instances of unsafe, unsanitary and dangerous installation practices. These, he asserted, were the result of the lack of proper codes and regulation regarding installation of refrigeration and air conditioning equipment.

"This work is the business of a qualified contractor who has specialized in the business," Wright said. "Too many untrained men are being turned loose on the public in the guise of intelligent installers.

### Sales Law Protects

"And here is where the enforcement of the unfair sales law is needed. Many of these men will sell equipment at cost just to get the job of installing it and maintaining it. That is against the law. It not only deprives the contractor of his profit, but also deprives the public of safety in the installation."

Wright spoke of instances in other

cities where lives have been lost and tragic fires occurred because of improper installation of lines carrying refrigerant gases. He warned that such conditions possibly could also be found in Chattanooga.

"I don't know of any," he said, "but contractors in other cities I have visited say that bad conditions exist in their cities. It is probable that Chattanooga is no exception.

"Lots of men attempt to do jobs they aren't able to do. An air-conditioning unit has motors, wires,

*Continued on page 71*

### PERRY REPLACES TERRY ON CONTRACTOR BOARD

James E. Perry of Detroit, who formerly served on the board of directors of National Association of Refrigeration Contractors, has been elected to the NARC board to fill the unexpired term of James Terry, who resigned from the board upon leaving the refrigeration contracting business.

### ICE CREAM COMPANY FINED \$5,000 FOR "KICK-BACKS"

In a suit filed by the attorney general (Brock vs. Arden Farms, Inc.) in the Los Angeles County (Calif.) Superior Court (No. 554,445), a default judgment was recently entered against Arden Farms, Inc., an ice cream company, for \$5,000 on 10 counts of \$500 each for violation of the ice cream section of the California Agricultural Code, according to information verified by the Refrigeration Contractors Association of Northern California.

The first five counts involve ice cream "kick-backs" to five different wholesale customers, markets, and stores, in Stockton, Calif., which the State alleged were given "for the purpose of retaining the dairy products

### MORE CONTRACTOR NEWS ON PAGES 71 AND 72

business and as an offset against rental charges on refrigeration facilities" in violation of Chapter 12, Division IV, Sec. 730.2 (b) and (j).

These five gratuities totaled 68 gallons of ice cream with a market value of \$120.35, and drew penalties of \$2,500.

The other five counts of the complaint recite gifts of ice cream, menu cards, and advertising signs to designated wholesale customers, totaling \$190.06 in value, and drawing penalties of \$2,500.

The complaint, filed by Walter L.

*Continued on page 71*

### CITY OFFICIALS GUESTS OF CHATTANOOGA GROUP



Members of the Refrigeration Contractors Association of Chattanooga and guests are shown here at their recent meeting at which Ed Wright, past president of NARC, was a speaker and prominent city officials were guests. Seated (left to right): H. C. Evans, sergeant-at-arms; Clair E. Smith, vice president; Michael Quinn, city fire chief; Ed Wright; H. C. Abercrombie, county councilman; C. B. Souders, city building inspector. Standing (left to right): Abe Prebul, secretary-treasurer; Jack Hargraves, Robert Batson, C. C. Campbell, Ray Brooks, Charles Smith, Arthur Jones, B. C. McCall, Clyde Lewis, city health department; William Prather, Jack Chambliss, attorney; A. J. Goza, and J. B. Corlew, president of the Chattanooga association.



# NEW **FROSTLINE** GAUGES

## WIN WARM WELCOME



Figure 1700-S



Figure 1705-S



Figure 1700-ST

**Brother! What Gauges! They have features Service Engineers dream about. Check a few now:**

- Adjustable pointer • Luminous dial • Removable screw check
- Beryllium copper Bourdon tube • Unbreakable crystal
- LOW SIDE protection to 200 pounds • No extra charge.

They're new . . . they're accurate . . . they're easy to calibrate in the field. Frostline Gauges are made to meet the most exacting needs of refrigeration service engineers. Both the "HIGH SIDE" and the "LOW SIDE" gauges have adjustable pointers easily accessible for resetting—an easy screwdriver job. For better readability, dial and pointer are treated with luminous material to glow in those semi-dark locations. The "LOW SIDE" Frostline gauge has a long, finely-divided, vacuum scale, with one-inch of Mercury graduations, and a 60-pound pressure scale. Yet, it will safely withstand the maximum working pressure of Freon 12. A set of Frostline gauges will take care of all your requirements. Get complete information and free literature now. Write, or use the coupon below.



### FROSTLINE FOR REFRIGERATION

#### UNITED STATES GAUGE

DIVISION OF AMERICAN MACHINE AND METALS, INC.  
SELLERSVILLE (2), PA.

Please send us more information and free literature on Frostline Gauges.

Name of Co. \_\_\_\_\_

Individual \_\_\_\_\_ Title \_\_\_\_\_

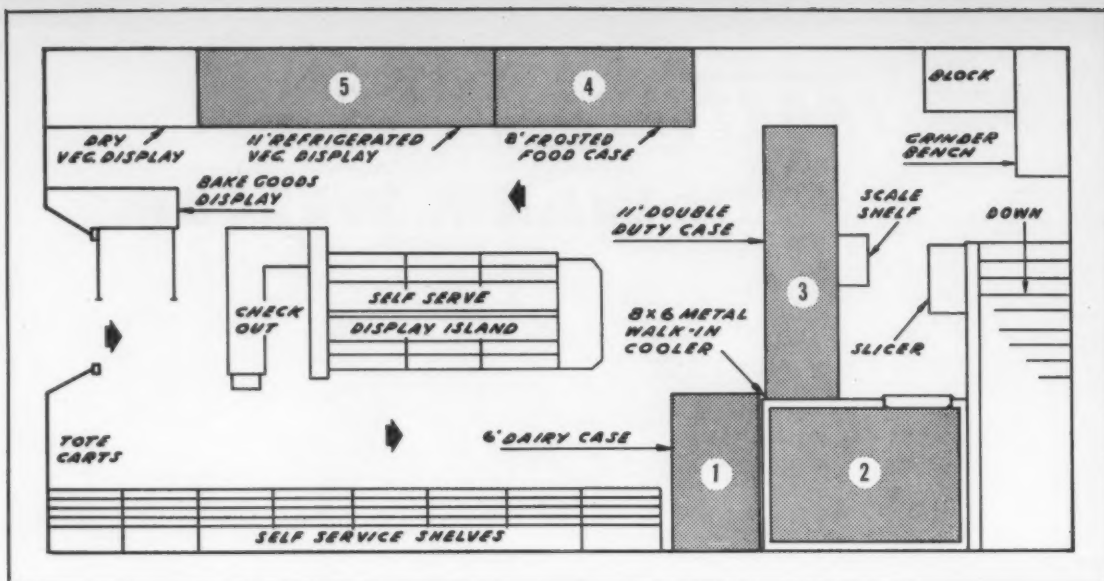
Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



U.S. PATENTED JULY 1948





Shaded sections of floor plan indicate placement of refrigerated fixtures. Numbers correspond with those in the two photos below.

# *\$1500 per Sq. Ft. —*

—that's the ratio of refrigeration equipment value to floor space in this tiny neighborhood market which bills itself as "the biggest little store in Erie." This compact installation proves once again that even the smallest stores make good customers



This view down the left-hand aisle of the Farrell store gives an inkling of its compact layout. Refrigerated fixtures are identified as follows: (2) walk-in cooler; (3) double-duty case; (4) frosted food case; (5) vegetable display case.

**C**RAMMING \$10,000 worth of commercial refrigeration equipment into a tiny 19 x 36-foot neighborhood food market—and still leaving room for the customers—is a neat trick if you can do it.

One man who can is Tom Quinn, commercial refrigeration dealer in Erie, Pa., who proved it by the installation he made in Guy Farrell's "biggest little store in Erie".

This unimposing little neighborhood market, located at the corner of 4th and Chestnut, sells both groceries and meats from its "pocket-size" sales floor which totals less than 700 square feet in area. Into this limited selling space, Tom Quinn maneuvered no less than five major pieces of refrigeration equipment with a total valuation of nearly \$10,000.

Quinn also supplied the other market equipment, from the porcelain-finished all-steel shelving to the check-out counter and the Bulman tote carts which the customers push around this self-serve emporium.

The refrigeration equipment itself consists of one triple-deck open dairy case, an 11-foot double-duty meat case, an 11-foot self-service vegetable case, an 8-foot frozen food case, and an 8 x 6-foot walk-in cooler. All of these fixtures bear the Hill trademark, with the exception of the frozen food case which is a Tyler unit.

All condensing units for these fixtures are remotely located in the basement of the store. Each is placed as nearly as possible under the unit which it serves, so as to eliminate long



**ABOVE**—The unpretentious exterior of Guy Farrell's store hardly stamps it as a promising prospect for a \$10,000 sale.

**RIGHT**—Storekeeper Farrell (in apron) shows refrigeration dealer Tom Quinn how cool his new dairy case keeps the milk.



runs of tubing. Largest of these condensing units is the 1-hp G-E unit powering the frozen food case. Another 1-hp unit is connected to the vegetable case. The dairy case is powered by a 3/4-hp Merchant & Evans compressor, the meat case by a 1/2-hp M&E unit, and the walk-in by a Universal Cooler unit of like size.

Tom Quinn likes this installation,

*Continued on page 57*

Looking down the market's other aisle a cluster of refrigerated fixtures is visible in the background. They can be identified as follows: (1) dairy case; (2) walk-in cooler; (3) double-duty case. Tom Quinn also supplied the shelving.



# ABOUT *People*

**George C. Crow, Jr.**, is now associated with Boyd Evans at United Refrigeration Supply Co., refrigeration parts wholesaler in Memphis, Tenn., in the capacity of sales engineer. He will work with customers of United Refrigeration Supply on



their refrigeration equipment and applications problems. Crow is a graduate of Alabama Polytechnic Institute in mechanical engineering.

**Byron E. James** has been appointed chief engineer of McQuay, Inc., Minneapolis manufacturer of heating, air conditioning and refrigeration equipment. James came to McQuay from Liquid Carbonic Corp., Morrison, Ill., where he was chief engineer and general manager. Previous to joining Liquid in 1947 he had been with York Corp. At McQuay he will direct new product development, present product improvement and applications, production inspection and patents.



**E. W. Pat Smith** has been named special assistant to the general sales manager of Owens-Corning Fiberglas Corp. He will work with the company's branch offices and sales divisions on the distribution of Fiberglas products into industrial, building and related fields. Until recently Smith was vice president of sales for Philip Carey Mfg. Co.

**Clayton L. Coulter** has been named general manager of the refrigeration division of Lehigh Mfg. Co., Lancaster, Pa. to succeed **J. C. Miller**, who has resigned to become executive vice president of Berlin Chapman Co., Berlin, Wis., manufacturer of heavy processing equipment.

Coulter has been with Lehigh for more than two years, and has been successively Detroit district manager, sales manager, and assistant general manager and plant manager. According to Frank E. Shumann, president, there will be no basic changes in Lehigh policies.

**Leo G. Saettele** has been appointed sectional sales supervisor in the northeastern states for Bally Case & Cooler Co. of Bally, Pa., manufacturer of commercial refrigeration fixtures. Saettele has for some time prior to this been associated with sales work in refrigeration and air conditioning in Pennsylvania. He will expand the company's contacts with display case and cooler distributors and dealers.



**W. H. (Bill) Kramer** has been appointed to handle the newly organized heating department at Chase Supply Co., Chicago parts wholesaler. He formerly was manager of the Chicago office of Superior Valve & Fittings Co., and at one time was supervisor of midwest sales for Minneapolis-Honeywell.

Chase Supply Co. until recently was known as Chase Refrigeration Supply Co. The new name was adopted when heating equipment was added to the company's stocks.

**F. W. Hottenroth**, formerly chief engineer of Penn Electric Switch Co., has been named Detroit representative of Clifford Mfg. Division, Standard-Thomson Corp., manufacturer of bellows used for temperature control in the refrigeration and other industries.

In changes in the Norge sales organization, **J. R. Cameron**, formerly assistant to Harry L. Spencer, director of manufacturing, has been named



Spencer



Cameron

merchandise manager, and **R. C. Connell** has been named field manager. Cameron will coordinate and supervise the over-all product program for the sales department, and Connell will be responsible for the activities of the six regional managers and 18 district representatives.

**Dean Spencer**, long associated with Norge, has been named refrigeration sales manager. He will be in charge of sales of refrigerators, freezers, and refrigeration specialties. Assisting him will be **Frank H. Toler** as supervisor of water cooler sales. **R. H. Klingler** has been placed in charge of contract sales.

Regional managers include **C. H. Alden**, Atlanta; **James H. Baine**, Memphis; **R. H. Pizor**, New York; **J. H. Webster**, Detroit; and **J. M. Tenney**, Los Angeles. **L. W. Philippi** has been placed in charge of sales promotion and **H. R. Stouffer** will supervise sales training. **W. S. Law**, general sales manager, has resigned effective May 1 to become associated with Auto Equipment Co., Denver Norge distributor, as general manager of its appliance division.

In recent promotions at Redmond Co., Inc., Owosso, Mich., **James Tweedy** has been named vice president in charge of induction motor

*Continued on page 75*



**SERVICE  
MEN...**

## **HARDWARE REPLACEMENT**

**means more sales...easy sales...good profit**

*in addition to your time and service charges*

**YOU MAKE 40% PROFIT  
ON HARDWARE**

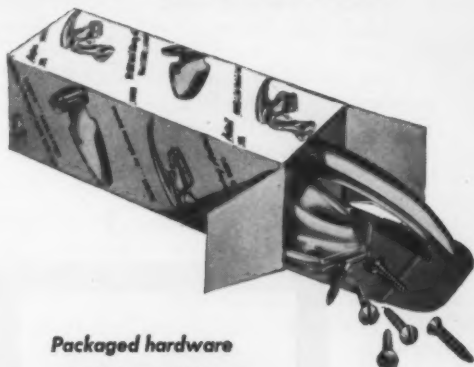
There's a big market for hardware replacement business right in your own city. Worn locks, strikes, and hinges mean poor refrigeration... you can replace them quickly, easily, profitably with Grand Rapids Brass packaged units. In addition to your time and service charges, every \$20.00 sale of Grand Rapids Brass replacement hardware means \$8.00 profit for you!

Be sure of satisfied customers. Beautifully designed chrome-plated hinges operate smoothly on self-lubricating oilite bearings and stainless steel pins. Install these units and insure complete customer satisfaction. Take advantage of this profit opportunity. See your jobber today.



Assembly  
No. 4722-10

**"THE LOCK WITH LIVING ACTION"  
—WHEN IT TRIPS IT GRIPS.**



**Packaged hardware  
complete with chrome-  
plated brass screws.**

**Grand Rapids Brass**  
C O M P A N Y

GRAND RAPIDS 4, MICHIGAN

and AIR CONDITIONING • JUNE, 1949

A DIVISION OF  
CRAMPTON MANUFACTURING COMPANY



# MAKE YOUR JOB PROPOSAL

Is your job proposal just a collection of cost figures? It can be a real selling tool for you, if you take advantage of the opportunity it gives you to tell a story about your company and its services. Here's an account of how one refrigeration contractor has done it.

**Y**OUR JOB proposals can be real selling tools for you—if you take the time and trouble to make them detailed and informative outlines of the equipment you're going to furnish and the responsibilities you are prepared to assume in connection with the installation.

Practically every refrigeration firm, at one time or another, is called upon to supply information on the type of equipment and services it is prepared to furnish for a refrigeration or air conditioning job on which it is bidding in competition with other firms in its territory. The firm that realizes that such a job proposal is considerably more than a simple collection of figures showing the estimated cost of the installation—that it is, in fact, or at least can be, an important factor in influencing who finally gets the job—has a better than even chance of coming up with a good share of the business.

One firm which has realized the importance of the job proposal as a sales tool, and developed an effective method of using it as such, is Refrigeration Sales Corp., Cleveland refrigeration contractor.

In submitting a bid on the equipment and work involved in a proposed installation, Refrigeration Sales Corp. prepares a special "proposal booklet", made up especially for the job in question, and giving a detailed outline of the equipment recommended for each fixture, the proposed installation procedure, total costs, warranty agreement, and a listing of the part of the installation to be done by other firms than itself.

According to the company's experience, five major guideposts determine to a large extent the most

effective use of the job proposal booklet. They are:

1. The booklet must be prepared especially for the individual prospect, and must show clearly that it has been prepared especially for him.
2. It must be written in the prospect's own language, and must show clearly and simply what the completed job will comprise.
3. It must show clearly where the refrigeration contractor's responsibility ends, and what parts of the installation are being handled by others and are therefore apart from the refrigeration man's part of the job.
4. The proposal should be presented by a representative of the contractor firm, so that it can be used to full effectiveness as a sales tool.

5. In all proposals, the contractor's service facilities should be emphasized, since these are very important in helping to swing the job your way.

In submitting a proposal, the company is always careful to "tailor" it especially for the individual prospect; and this applies whether the job be large or small.

"The prospective buyer is usually impressed by the fact that such a proposal is specifically designed for him," says Warren Farr, head of the contractor firm. "To him, this indicates that his particular needs and

**SECOND FED**  
banking in comfort

**Knowledge Ability**

**REFRIGERATION SALES AND SERVICE**

**Knowledge and ability wins another air-conditioning job for Refrigeration Sales Corp.**

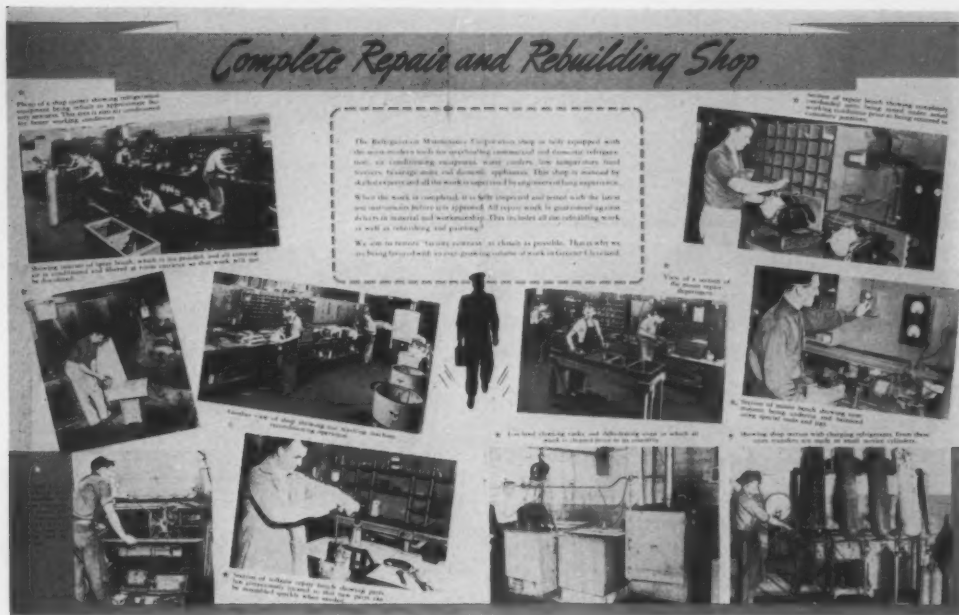
We selected Refrigeration Sales Corporation to install a new air conditioning system for the Second Federal Savings & Loan Society, 121 South Ave., Cleveland, Ohio. This job was completed in a record time and at a very low cost. We were confident that our knowledge and ability to provide the best service to our customers.

Our service is complete in all phases of the business. We have a complete line of equipment and materials. We have a complete line of service and repair. We have a complete line of installation and maintenance. We have a complete line of parts and accessories. We have a complete line of service and repair. We have a complete line of installation and maintenance. We have a complete line of parts and accessories.

**REFRIGERATION SALES**  
1111 Carnegie Avenue  
Cleveland 14, Ohio

An important part of Refrigeration Sales Corp.'s job proposal booklet is the "testimonial" sheet, in which a satisfied customer praises the firm's "knowledge and ability."

# Sales Tool



Service helps to clinch the sale. This spread shows the company's shop facilities. It's part of a 12-page brochure that is included in every job proposal that is prepared.

requirements have been thoroughly investigated before you submitted the proposal."

Naturally, the elaborateness of the proposal will vary with the individual job; in the case of larger jobs, it may take several sheets to list equipment requirements, while on the smaller jobs these may take up only a single page. But, whether the job be large or small, the proposal is a "tailor-made" presentation, recognizable as such by the prospective purchaser.

A second important point is that the proposal be written in a language the prospect can understand. In the proposals presented by Refrigeration Sales Corp., each paragraph is titled for quick reference, and a neat printed appearance is obtained by using a proportionate spacing electric typewriter.

Important paragraphs, such as Installation, Cost, Warranty, and Work by Others, state concisely what the

contractor's obligation is as far as installation is concerned, what the total job will cost, how it is to be warranted, and what the owner is expected to do.

Especially important is a listing of the parts of the job to be done by firms other than the refrigeration contractor. Here is where much of the misunderstanding as to "who's responsible for what" occurs after the installation is in. If the proposal sets forth clearly where the refrigeration contractor's responsibility ends, much cause for future trouble may be avoided.

One thing the company has found to be especially important in using

These typical pages from the company's brochure on its maintenance facilities stress the scope and quality of the work that it turns out and the area and types of commercial customers which it now serves.

Install

Service

**SCOPE OF OUR WORK**  
with Service Engineers  
who are *Trained Experts*

• Refrigeration Maintenance Corporation is equipped to install, service, repair and maintain your equipment. This experienced organization is trained to serve your needs. It is the natural outcome of our group, properly conditioned, that has brought us the leadership we have achieved.

*A Service Covering Greater Cleveland's...*

<ul style="list-style-type: none"> <li>Meat Markets</li> <li>Delicatessens</li> <li>Taverns</li> <li>Drug Stores</li> <li>Bakeries</li> <li>Grocery Stores</li> </ul>	<ul style="list-style-type: none"> <li>Restaurants</li> <li>Factories</li> <li>Offices</li> <li>Institutions</li> <li>Homes</li> <li>Soda Fountains</li> </ul>
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- Commercial Refrigerators
- Air Conditioning Equipment
- Water Coolers
- Beverage Units
- Food Freezers
- Washing Machines
- Refrigerators
- Domestic Refrigerators

CUYAHOGA COUNTY

With a new modern air conditioned plant, and a fully stocked organization of trained specialists, the Refrigeration Maintenance Corporation is serving the entire Greater Cleveland area. This service includes erection, maintenance and service on all kinds of refrigeration, commercial refrigeration, low temperature food storage and equipment in the neighborhood of your requirements. We are experienced in servicing Refrigeration and related units with care and efficiency. Having a service expert, stationed in every vicinity in this area, the Refrigeration Maintenance Corporation can handle Greater Cleveland with prompt dispatch.

and AIR CONDITIONING • JUNE, 1949

45

the proposal is that it should always be presented by a representative, never presented by mail. A personal presentation makes it possible for the salesman to use the booklet as a real sales tool, and to emphasize the points that will assure a favorable reaction on the part of the prospective buyer. This is particularly true in the case of those prospects who might be shopping around, and to whom, without a salesman there to explain various points, price alone might be a determining factor.

"Normally, when presenting any job proposal, when the point is

reached where price is mentioned, it is usually best that this discussion occur after the prospective customer and the salesman have thoroughly covered the job," Farr says. "We, therefore, place the cost references in the middle of our proposal booklet, and properly follow this with information concerning our organization."

For the latter, Refrigeration Sales Corp. uses a printed leaflet (one of several available and applying, wherever possible, to the same type of job) containing user testimonials as to the type of job the company does. This shows the prospect what other

customers in his own type of business have to say about the firm, and indicates to him that the company is equipped to do the sort of job that will give him satisfaction and economical operating costs.

The method of presentation is important, the company has found, in helping to soften whatever objections might be built up by the prospect whose initial tendency might be to buy on a price basis alone. Taking the extra time to "sell" him on the soundness of your organization, and then, if necessary, going back to the discussion of price goes a long way toward influencing a favorable decision.

### Tell a "Tailored" Story

In presenting the job proposal, the salesman is careful to note those sections of the installation that interest the prospect most. Naturally, these sections are stressed. Some prospects may be very much interested in the straight mechanical details of the proposed installation; others may be more interested in the list of satisfied users shown in the proposal.

An important part of every proposal submitted by Refrigeration Sales Corp. is the section on its service facilities; for service, the company believes, plays a major part in influencing many eventual sales.

Typically, this section of the job proposal starts out with a letter phrased as follows: "The following brochure is enclosed to point out to you our service facilities. We feel that after a good installation has been made, good service facilities are necessary to assure customer satisfaction."

### Service Helps the Sale

The brochure on service, which is inserted at this point in the proposal booklet, is a 12-page, letter-size piece containing photographs and descriptions of the company's maintenance facilities, repair parts stocks, service personnel, and showing pictures of several installations which have been made and are now being serviced by the company.

The company's experience has been that, after a prospect has had an opportunity to "browse" leisurely through the engineering and service material, you can then get down to cases with him on the matter of price. After he sees the kind of organization you represent, and espe-

*Continued on page 74*

## He won't talk!

WHY DO YOU HAVE  
A REPUTATION FOR  
"KNOWING ALL THE  
ANSWERS" ON COM-  
BATING MOISTURE?

WHY IS IT  
YOU HAVE  
FEWER CALL-BACKS  
ON YOUR  
MOISTURE CASES?

WHY IS IT YOU  
CAN FINISH A  
MOISTURE CASE IN  
A FRACTION OF  
THE TIME WE TAKE?

WHY IS IT YOU  
ARE NEVER "STUCK"  
ON EVEN THE  
MOST TROUBLESOME  
MOISTURE PROBLEMS?

Last November, at the R.S.E.S. Exhibition in Chicago, a refrigeration service engineer strolled up to our booth and started a discussion on Thawzone. He laughingly stated that he was somewhat of a "mystery man" to his brother engineers, since he invariably solved his moisture problems without "batting an eye". Naturally, they wanted to know how he did it. "No," he said, "you'll have to figure it out for yourself. That's my trade secret." Confidentially, he is using Thawzone. Perhaps you too can benefit from this man's experience.

Your wholesaler carries THAWZONE

**HIGHSIDE CHEMICALS COMPANY**

10 Colfax Avenue, Clifton, N. J.

# THAWZONE\*

PATENTED

The PIONEER FLUID DEHYDRANT

\*TRADE MARK REG. U. S. PAT. OFF.

ALSO MAKERS OF

## TRACE\*

REFRIGERANT  
LEAK DETECTOR



# REFRIGERATION INDUSTRY

## News

### TEXTILE COOLING BILL IS KILLED

A force bill for textile mill air conditioning has been killed in the South Carolina general assembly. The House disposed of the controversial measure on a 53-45 roll call vote.

The proposed measure, as amended, would have required air wash air conditioning systems, or better, in all the state's textile mills.

Authors of the bill, representatives Long, of Union, and Poliakoff, of Spartanburg, cited "human reasons" and health betterment in urging its passage. Opponents of the measure said the bill was "harmful" to industry and would keep new industry out of the state.

### LINGLE LEASES NEW PLANT SPACE

Lingle Refrigerator Co. has leased a two-story brick building at 1114 Truman Road, Kansas City, Mo., and will soon move from its present quarters at 90th St. and Troost Ave., Kansas City. Headed by C. M. Lingle the firm manufactures various types of commercial refrigerators, beverage coolers and self-service display cases. Its principal plant is at Russellville, Ark.

### DEEPFREEZE PRICES DROPPED \$10-\$25

Deepfreeze Div. of Motor Products Corp., North Chicago, has announced price reductions of from \$10 to \$25 on its home freezer models. Model B6 has been reduced from \$239.95 to \$229.95; Model C6 from \$269.95 to \$249.95; Model B10 from \$389.50 to \$369.50; Model C10 from \$449.50 to \$424.50.

### WAREHOUSE SPEEDS BALLY SERVICE

Bally Case and Cooler Co., Bally, Pa., has erected a new fireproof warehouse of steel and concrete for greater storage of raw materials and finished stock. The new building is part of the company's plant expansion program.

It is expected that this increase in warehouse facilities will enable the company to handle the anticipated demand for seasonal cases such as small all-purpose display cases and bottle coolers. Orders can thus be filled from stock without delay.

The all-purpose "Coldisplay" case is designed to conserve space in hotels, restaurants, taprooms, retail bake shops, drugstores, flower shops, candy stores, diners and delicatessen stores.

### REMINGTON LICENSED BY FRIGIDAIRE, HOOVER

Under the terms of a license agreement recently signed between Remington Corp., Cortland, N. Y., and R. R. Fitzsimmons, Agent for the Hoover Co. and Frigidaire Division of General Motors Corp., Remington may use inventions owned by Hoover and Frigidaire in the manufacture of its room air conditioning units. The inventions in question apply to both console and window type room air conditioners.

### JOIN REMA GROUP

New members recently joining Refrigeration Equipment Manufacturers Association include Remco, Inc., Zellenople, Pa.; Fine Products Co., Chicago; General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.; and Jordan Refrigerator Co., Inc., Philadelphia. Total REMA membership now stands at 120 firms.

### ADDS COOLING LINE

Hajoca Corp., refrigeration wholesale firm, has announced that it is adding a line of refrigeration equipment in its Baltimore, Md., branch office.

### SHOW MANAGEMENT ASSUMED BY REMA

R. K. Hanson has resigned as director of the 6th All-Industry Refrigeration and Air Conditioning Exposition, and management of the event has been placed in the hands of W. Vernon Brumbaugh, executive secretary of Refrigeration Equipment Manufacturers Association, and George Mills, assistant executive secretary.

The All-Industry Show will be held in the Atlantic City (N. J.) Auditorium. Hanson had been manager from Nov. 14 through 18, of the two previous Shows, held in Cleveland in October, 1946 and January, 1948.

All correspondence in connection with the Show should be directed to REMA headquarters, 1346 Connecticut Ave., Washington 6, D. C.

### CROSLEY PARTS NEW IN DELAVAN LINE

A complete line of replacement parts for Crosley compressors has been announced by Delavan Mfg. Co., Des Moines, Iowa.

The Delavan line now includes pistons, piston pins, connecting rods, diaphragm seals, eccentrics and eccentric shafts for Crosley compressors.

## MANUFACTURERS AND WHOLESALE DISCUSS MUTUAL PROBLEMS



Manufacturers and wholesalers enjoyed another opportunity to discuss their mutual problems during this joint session of REMA-

REWA directors during REMA's annual spring meeting at Chicago's Edgewater Beach hotel last April.

## CUSTOMERS, SUPPLIERS CELEBRATE JOBBER'S 10th BIRTHDAY



Refrigeration Equipment Co. of Kansas City, Mo., celebrated its 10th anniversary as a wholesaler of refrigeration equipment and supplies by treating both its customers and suppliers to a good time. Top photo is a view of the smorgasbord dinner which the company threw for its customers at the Mart Restaurant. Below is a view of the head table at the "manufacturers appreciation dinner" which the company staged for its suppliers. E. L. (Ernie) Tramposh, head of the wholesaling firm, is seated third from right, flanked by his wife and Harry Bristol of Bristol Refrigeration Supplies, an affiliated store.

## DETROIT SCHOOL REVISES COURSE

Detroit Air Conditioning Institute, operated under the direction of George H. Clark, has announced a revision of its curriculum which now divides the established course into the following 12 sections:

Basic engineering, thermodynamics, steam and combustion, electricity, elementary refrigeration, advanced refrigeration, heating, mechanical and architectural drawing, ventilating, advanced air conditioning, sheet metal layout, and heat pumps.

## REMA WATER COOLER GROUP LAYS PLANS

Fedders-Quigan Corp. of Buffalo, New York, was elected to membership in the Water Coolers Product Section of REMA at its last meeting, held in Washington, D. C.

A committee consisting of

L. C. Berken, C. F. Hansel and S. Whitt, was appointed to work together in supplying material to RSES on the products made by members of the Drinking Water Cooler Manufacturers Association, for use in the RSES Master Service Manual.

A. A. Zollo of Filtrine Mfg. Co. was appointed publicity chairman of the Product Section. A. R. Benua, president of Ebco Mfg. Co., was nominated to fill the unexpired term of H. F. Hildreth, as a director of REMA, representing the Water Coolers Product Section.

## MILLER ELECTRIC CO. ADDS CARRIER LINE

Miller Electric Co. has been appointed associate dealer for Carrier Corp. in the western New York territory, according to Scott J. Hoehn, manager of self-contained equipment for Carrier's New York dealer organization.

The Miller firm is headed by Bert G. Miller, who is a director of the international RSES organization as well as being active in local and state RSES groups.

The Miller organization will handle the Carrier line through Cooney Co., Carrier distributor in Buffalo. B. G. Spencer, dealer sales manager of Cooney, was instrumental in arranging the Miller franchise.

## DEEFPREEZE EXTENDS PRICE PROTECTION

Deepfreeze Div., Motor Products Corp., has extended its price protection plan to cover both distributor and dealer inventories of current model freezers. Originally the price protection plan covered distributor inventories only. Both distributors and dealers now are protected in event of price changes for a period of 90 days from date of purchase.

## ASRE GROUP WILL STUDY DESICCANTS

A standards committee has been established by American Society of Refrigerating Engineers for the purpose of setting up rating and testing standards for desiccants.

To date there is no accepted method of rating and testing the many desiccants or refrigerant driers which are marketed under many trade names. Many purchasing agents as well as government buying departments have expressed the need for a uniform method of judging the drying efficiency of various desiccants.

The committee is now studying the many published articles and technical data available on desiccants and the chairman, W. O. Walker, enlists further suggestions from engineers in the industry who are familiar with drying problems. Unpublished information is also requested since it is felt that a great deal of such data exists in the files of the industry.

The committee is made up of the following members: W. O. Walker, Ansul Chemical Co., chairman; L. H. Bartlett, Louisiana State University; R. E. Cherne, consulting engineer, Rochester, N. Y.; W. A. Pennington, Carrier Corp.; W. F. Wischmeyer, Sporian Valve Co.; R. L. Williams, Kinetic Chemicals, Inc.; and P. L. Veltman, Davison Chemical Co.

## OREGON DEALER HAS MODERN SHOWROOM

The solid wall of glass which forms the front of the building makes just one big showroom out of the new headquarters of Johnson Electric Supply, commercial refrigeration sales and service contractor of Coos Bay, Ore.

Low and flat and modern in every respect, the new building forms an outstanding landmark on the Waterfront Highway between Coos Bay and North Bend. Handling refrigeration equipment for restaurants, dairies, taverns, grocery stores, meat markets and many other commercial applications, the firm is owned by A. A. Johnson.

## YORK DISTRIBUTORS GAIN NEW VOICE IN COMPANY POLICIES

With the first meeting of its National Distributor Sales Advisory Committee now behind it, York Corp. has officially launched itself on a new program of manufacturer-distributor relations. Chairman of the first meeting was John R. Hertzler, vice president and general sales manager, and the full committee was in attendance.

Purpose of the committee meetings is to give key distributors, elected by the distributors themselves, the opportunity to present to York management, for immediate discussion, plans for improving York products and services, distributor business, personnel problems, advertising, sales, sales promotion, accounting, engineering, servicing, methods and procedures, and, in fact, to discuss all phases of the distributors' business and their relations with York Corporation on the one hand and their customers on the other.

Representing distributors at this first meeting were P. H. Erisman, Washington, D. C.; H. C. Benington, Toledo, Ohio; M. L. Brown, Dallas, Tex.; and R. W. Noll, Los Angeles, Calif. District offices of York were represented by district managers M. M. Crout of Atlanta, Ga., and J. J. Floreth, Chicago, Ill., and by district commercial sales managers F. B. Reynolds, New York, N. Y., and H. A. Ware, St. Louis, Mo.

In addition to chairman Hertzler, the York factory was represented by W. E. Landmesser, manager of resale sales; D. C. Seitz, manager of distributor sales; and John S. Garceau, director of advertising and sales promotion.

Factory members of the committee serve permanently, but the representatives from the field, one from each of the eight York sales districts, are elected for a period of one year on a rotating basis. The group always is comprised of four distributor representatives, two district managers, and two district commercial sales managers, the latter being directly responsible for distributor operations.

## JENNINGS HEADS MEMPHIS DEALER ASSOCIATION

The Memphis (Tenn.) Refrigeration and Air Conditioning Dealers Association has been organized, with William B. Jennings, of Jennings Equipment Co., as president. Other officers are Spencer Stephens, of Stephens Bros., vice president; and Charles E. Hendricks, of Memphis Refrigeration Co., secretary-treasurer.

The association will hold monthly meetings. It was formed to promote the industry and to better relations between competitors, dealers and customers.

## TWO FIRMS SPLIT BAKER FRANCHISE

Baker Refrigeration Corp., South Windham, Me., has appointed Birmingham Gas Heating and Air Conditioning Co., and Flint Refrigeration Co., Inc. as dual distributorship to handle Baker ammonia and Freon refrigeration equipment as well as its line of air conditioning equipment for the northern half of Alabama. Birmingham Gas Heating and Air Conditioning will emphasize air conditioning installations, while Flint Refrigeration will emphasize refrigeration applications.

## BALTIMORE AIRCOIL NAMES 3 OUTLETS

Baltimore Aircoil Co., Inc., Baltimore, Md., manufacturer of evaporative condensers, has announced appointment of the following distributors:

J. Harvey Seat & Associates, Atlanta, in Georgia and northern Florida; Hoffman & Hoffman Co., Greensboro, N. C., in North and South Carolina; and Standard Brass & Mfg. Co., Beaumont, Tex., in the gulf states area.

## NAMED TO DISTRIBUTE WILSON EQUIPMENT

Wilson Refrigeration, Inc., Smyrna, Del., announces the appointment of Russell L. Clark of Clark Distributing Co., as a new distributor for their Allentown, Pa., territory.

**YOUR SALES WILL**

**WHEN YOU SELL**

*Cool Cool*

**SNO-BREZE**

**AIR COOLERS**



**YES, your sales will grow and grow and GROW.**

*Here's why -*

**17 SUPERIOR MODELS!**  
Each one a cooling beauty perfected to the limit.

**MARKET COVERAGE!** Trailers to mansions, stores of all types and sizes, offices, hotels, courts, filling stations, factories, warehouses. **ONLY SNO-BREZE** can give you such complete coverage with a perfect model and size for every type installation.

**TOP EFFICIENCY!** Mister, 40 years of air conditioning leadership speaks for itself — but here's **PLUS PROOF OF SNO-BREZE SUPERIORITY.** Just have your customer make the "Heart-of-a-cooler" test and he **TOO** will prove SNO-BREZE by far the best!

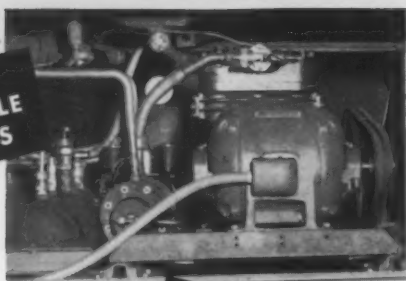
**SNO-BALL YOUR COOLER SALES.**  
Write for Sno-Breze literature and name of closest distributor to-day. Dept. I-2



*Palmer* **MFG. CORP.**  
PHOENIX, ARIZONA



FOR  
PORTABLE  
PLANTS



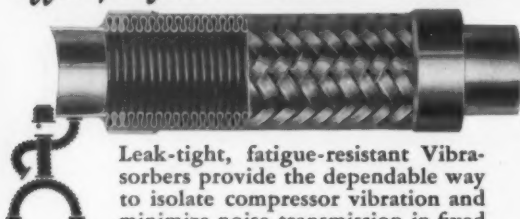
OR  
STATIONARY  
PLANTS



**CMH Rex Super-Service**

## VIBRASORBERS

*offer perfected vibration control*



Leak-tight, fatigue-resistant Vibrasorbers provide the dependable way to isolate compressor vibration and minimize noise transmission in fixed piping. These compact, in-line units are easy to install and require no maintenance for their long life. They are your best insurance against costly loss of refrigerant caused by failure of inferior units. Any refrigeration or air conditioning installation is a better installation when you use CMH Rex Super-Service Vibrasorbers.

Standard bronze units are made in sizes from 1/4" through 4" I.D. Steel and stainless steel units for other vibration services are also standard assemblies.

Write for specification sheets and prices.



**CHICAGO METAL HOSE CORPORATION**

Leaders in the Science of Flexonics

MAYWOOD, ILLINOIS

Plants at

Maywood, Elgin and Rock Falls, Illinois

In Canada:

Canadian Metal Hose Co., Ltd., Brampton, Ontario

## KELVINATOR WATER COOLERS REDUCED

In introducing a new 1949 line of electric drinking water coolers, Kelvinator has announced price reductions on practically all of the new models as compared with 1948 prices on coolers of similar sizes.

New prices on the various models follow, with 1948 prices on comparable models shown in parentheses: BE-2, \$213 (\$220); BE-R, \$284.50 (\$294); PE-5, \$231 (\$244); PE-10, \$253.50 (\$274); BE-2-V, \$236 (\$244); BE-RV, \$304 (\$318); PE-10-V, \$260 (\$298). Prices on all models equipped with sealed units include five-year warranty, delivery and start-up.

## REMINGTON DROPS PRICE ON UNITS

Price reductions ranging from \$30 to \$65 on its three most popular room air conditioner models were announced recently by Remington Air Conditioning Div. of Remington Corp., Cortland, N. Y.

The new national suggested list prices for models in the company line follow, with former prices in parentheses: Model 6 (1/2 hp) \$369.50 (\$399.50); Model 8 (3/4 hp) \$434.50 (\$499.50); Model 10 (1 1/4 hp) \$759 (\$759); Model 12 (1 1/2 hp) \$895. Models 6 and 8 have an additional \$5 charge for warranty on the hermetic compressor assemblies. Water cooled models 10W and 12W still list at \$775 and \$875, respectively.

## NEW OUTLETS NAMED FOR FEDDERS UNITS

Fedders-Guilgan Corp., Buffalo, has announced appointment of the following new distributors for Fedders room air conditioners:

A. E. Borden Co., Inc., Boston; Johnston Refrigeration Sales Co., Detroit; General Electric Co., Oklahoma City; the Frank Corp., Savannah, Ga.; Mott Brothers Co., Rockford, Ill.; Ara Distributing Co., St. Louis; Brownlow's, Inc., Winston-Salem, N. C.; and Nicholson, Inc., Durham, N. C.

## 1949 WARREN LINE SHOWN TO DEALERS

New commercial refrigerator models and sales plans for 1949 were shown to approximately 200 dealers and district sales managers of the Warren Co., Inc., Atlanta commercial refrigerator manufacturer, at a two-day meeting recently in Atlanta.

Twenty-nine different styles of commercial refrigerators were displayed at the meeting, many of them operating and stocked with products which they would carry in regular commercial usage. Highlighting the convention was the introduction of new models of cabinets for 1949, chief among which was a two-deck, open-type self-service display case for meats and dairy products, or both. Another new product was a wide-type open refrigerator for meats and dairy products, or both, with sliding doors below.

Also new was a wide-type fruit and vegetable case with mirror. Available as companion equipment is a mock counter of the same exterior design, also with mirror, that can be lined up with the refrigerated case for dry vegetable storage.

Warren introduced a new superstructure, adaptable to any model in its line, that provides an extra open-type top compartment for additional dry display, and a new combination refrigerator with middle section for packaged meats. Still another new model was a display and storage combination unit for dairy products, fruits and vegetables.

Speakers at an engineering session during the meeting included James Rodgers and Steve Luther of White-Rodgers Electric Co.; W. P. Myers, Jr., of Alco Valve Co., and W. S. Woodside of United Cork Companies. A sales promotion session also featured the meeting.

## BERNENS PROMOTED AT AIRO SUPPLY

C. J. Bernens, for the past two years office and credit manager at Airo Supply Co., Chicago parts wholesaler, has been promoted to business manager.



## THE BEST YEAR OF YOUR LIFE

in the Commercial Refrigeration and Air Conditioning Business . . .

**Is It Worth \$5 to You?**

See the Advertisement on  
Page 85

## DEVELOPING STANDARDS FOR COIL INDUSTRY

Under the guidance of the Joint Coil Committee of Refrigeration Equipment Manufacturers Association and Air Conditioning and Refrigerating Machinery Association, Inc., the commercial refrigeration industry is making progress in the development of recommended industry standards for blower coils.

The committee has outlined its four principal objectives as:

1. To develop suitable industry standards for forced-circulation air coolers for refrigeration covering recommendations on methods of testing and rating, minimum standard equipment, safety requirements, and minimum published data;
2. To recommend application standards pertaining to forced-circulation air coolers for refrigeration;
3. To develop suitable industry standards for natural-convection air coolers for refrigerating covering recommendations on methods of testing and rating, minimum standard equipment, safety requirements, and minimum published data;
4. To recommend application standards pertaining to natural-convection air coolers for refrigeration.

Members of the joint committee are: chairman, D. D. Wile, Refrigeration Engineering, Inc.; vice-chairman and secretary, S. F. Shawhan, Carrier Corp.; Byron S. Booher, Frigidaire Div., General Motors Corp.; H. A. Brysselbout, York Corp.; F. H. Faust, General Electric Co.; W. W. Higham, Universal Cooler; A. G. Loeffel, Kennard Corp.; S. Charles Segal, Kramer Trenton Co.; H. B. Williams, Mc-

Quay, Inc.; D. B. Zipse, Bush Mfg. Co. L. C. Bastian is secretary.

## MIAMI HOTEL INSTALLS \$100,000 SYSTEM

Installation of a \$100,000 air conditioning system in the Hyde Park hotel in Miami, Fla., is scheduled to be completed by mid-June, according to the owner and lessee of the building. Hill-York Co., local refrigeration and air conditioning firm, has been awarded the contract.

## NEW WHALING VESSEL INSTALLS REFRIGERATION

The Thorshovdi, new Norwegian whaling vessel now headed for the Antarctic on her maiden voyage, was fitted out with Carrier Corp. refrigeration equipment after getting underway. This was made possible because whaling ships have complete machine shops, and the equipment was installed by the Thorshovdi's own mechanics. The contract was handled by E. T. Anderson, Carrier's representative in Norway.

*Handiest and best Pocket Thermometer ever!*

## THE *New* MARSH POCKET THERMOMETER



It's watch-like in size and style. Easy to read in poorest light. Highly accurate. Has "Recalibrator slide" to keep it accurate. Rugged—in handsome, polished case of durable, heavy-gauge stainless steel. Unbreakable crystal. Sold at an unbelievably low price.

No guessing at error caused by handling or room temperature as with hard-to-read glass tube thermometers. Just place this instrument in freezing compartment, close refrigerator until temperature registers, open refrigerator and instantly read temperature on clear, legible dial.

This is a handy addition to every refrigerator serviceman's kit, developed by Marsh out of 80 years' experience in precision-instrument making.

JAS. P. MARSH CORPORATION  
DEPT. P, SKOKIE, ILLINOIS

Actual size  
above  
(2-3/16"  
diam.)  
Typical Marsh  
value. \$2.00



Clip holds Thermometer in pocket; also serves as hanger when used in refrigerator. Clip swivels to fit any position.



If ever knocked out of adjustment Thermometer has this "Recalibrator slide" for quickly correcting it to a thermometer of known accuracy.

Your Jobber has it in stock

# MARSH

BUY FROM YOUR WHOLESALER

*Refrigeration Instruments*

## MARINE REFRIGERATION . . .

*Continued from page 37*

pressors are employed, with shell and tube sea water condensers. The size of the refrigerating plants vary from 3 to 5 hp for small vessels, to over 100 hp for super-liners similar to those recently proposed for the U. S. Lines.

For the smaller plants one compressor is furnished, with complete stand-by as a spare. On the larger

plants, it is usually desirable to furnish two or three compressors to carry the load and one additional compressor as a complete stand-by.

Where cargo refrigeration or air conditioning is included, it is sometimes possible to arrange the installation so that one compressor serves as a stand-by for all three plants.

### **Ships' Stores Low Sides**

Evaporators for ships' stores compartments fall into three categories:

1. Air coolers, usually of ceiling

suspended type, for temperatures of 35F and above.

2. Prime surface coils for compartments maintained below 35F.

3. Plate type evaporators.

It has not been until recently that plate type evaporators have been installed on shipboard. They are usually arranged so that the plates form shelving which makes it particularly applicable for quick frozen food which is packed in uniform cartons.

### **Cargo Refrigeration**

Cargo refrigeration is more complex inasmuch as the ship owner requires an installation to provide sufficient flexibility to carry any type of perishable cargo and capable of maintaining any temperature from -10 to 55F.

Except for the completely refrigerated ship, most refrigerated cargo vessels are provided with multiple compartments accessible through doors leading to the hatch and confined to between deck spaces. The compartments vary in number and size depending upon the requirements of the trade.

### **Cargo High Side**

The high side equipment usually consists of multiple reciprocating Freon-12 compressors. In the case of some of the more modern installations where the tonnage is sufficiently large, Freon-11 centrifugal refrigerating machines are used.

The value of a single cargo often exceeds the cost of the entire refrigeration plant. Accordingly, regardless of the number of compressors required to carry the load, at least one compressor is provided for complete standby.

Electric motors are predominately used with reciprocating compressors. Steam turbines have been applied to good advantage on centrifugal machines which are particularly adapted to this method of drive, since its operating speed varies from 4000 to 8000 rpm.

Until recently, Freon-12 reciprocating compressors were driven through multiple V-belt drive. Today, compressors are designed to operate at 1750 rpm, making direct connec-

# ROTARY SEAL



## REPLACEMENT UNITS

For all makes and sizes of Commercial, Semi-Commercial, Air Conditioning, and Household Refrigerator Compressors. ROTARY SEAL Units are known throughout the world for . . . *Simplicity in Construction . . . Ease of Installation . . . Efficiency of Operation . . . Economy.* The original time-tested, precision-built replacements — 18 years of service.

**MORE THAN  
848  
MODELS**



**AT ALL  
LEADING  
JOBBERs**

**"Seal with**

**Certainty!"**

**2020 NORTH LARRABEE STREET  
CHICAGO 14, ILLINOIS, U. S. A.**

**CANADIAN AGENT: 2025 ADDINGTON AVENUE  
MONTREAL 28, QUEBEC, CANADA**

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**



**Copeland engineering**



**Copeland production**



**Copeland quality control**

These  
add up  
to easier  
sales . . .  
for you !



Especially since Copeland follows through with consistent advertising and merchandising helps. Copeland makes every prospect a potential sale by maintaining the most complete and flexible line in the industry.

# Copeland

**DEPENDABLE *Electric* REFRIGERATION**

Manufacturers of:  
Refrigeration Units,  
(Open-type and  
Copelametic),  
Water Coolers, Re-  
frigerators.

**COPELAND REFRIGERATION CORPORATION • SIDNEY, OHIO**

**and AIR CONDITIONING • JUNE, 1949**

tion to motors possible and thus resulting in a substantial decrease in space and weight.

### Cargo Low Side

In the case of cargo refrigeration, there are several types of low side equipment employed. Today, the most widely used design for the all purpose cargo vessel is known as the diffuser system. This consists of a fan coil assembly, either of the factory self-contained type or the built-up type.

Extended surface cooling coils are

commonly employed due to the savings in space and the reduction of refrigerant charge.

Defrosting is most effectively accomplished by sea water spray for direct expansion systems. In the case of indirect systems, it is the usual practice to circulate warm brine through the coils.

In the diffuser system, the conditioned air is normally distributed through sheet metal ducts, usually located around the periphery of the compartment and designed to blow either overhead, under gratings, or

both, depending upon the nature of the cargo.

The outlet slots for overhead distribution are placed near the ceiling. Bottom slots are also provided near the bulkhead to allow the air to blow down along the wall between the cargo battens and flow across the deck under the floor gratings. With this method, the cargo is completely blanketed with a constant circulation of conditioned air.

A second method is known as the wall coil type. This consists of zig-zag or hair-pin prime surface coils installed along the walls of the compartment enclosed in a solid baffle running from deckhead to the floor gratings. A sheet metal duct provided with bottom slots is run around the periphery of the walls above the cooling coils.

A re-circulating air blower forces the air through the duct work which



**For perfect control!**

## Electrimatic type WP WATER REGULATING VALVE

Electrimatic Type WP not only starts and stops the water, but also feeds the proper amount of cooling water to secure the correct condensing pressure without wasting water.

This versatile valve may be installed at either inlet or outlet water connection of the condensing unit, and may be serviced without breaking water or pressure connections. The activating connection can be made to either the compressor, condenser or receiver. For use with freon, methyl chloride or sulphur dioxide. Precision engineered, individually inspected and tested. Sizes  $\frac{3}{8}$  in.,  $\frac{1}{2}$  in. and  $\frac{3}{4}$  in. FPT.

Also available—Electrimatic's complete line of other sizes and types of Automatic Valves, Refillable and Non-refillable Driers, Strainers, Charging Lines, Quick Couplers and accessory items.

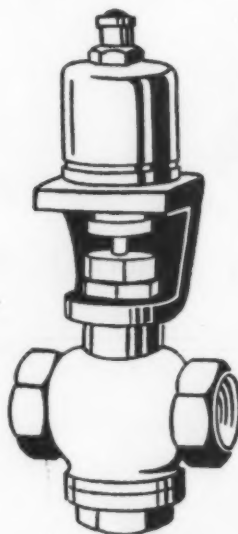
**Immediate Delivery—Ask Your Wholesaler**

# Electrimatic

2100 INDIANA AVENUE

CHICAGO 16, ILL.

CANADA—2025 ADDINGTON AVE., MONTREAL



TYPE WP

**A** GENERAL Electric Type H leak detector has helped speed production and improve product quality at the Bridgeport Thermostat Division of Robertshaw-Fulton Controls Co. Bridgeport, Conn.

The G-E instrument is used to test for leaks in experimental thermostats and certain types of finished units. Before it was installed, the units were tested by introducing air at pressures up to 50 psi and submerging them in water, escaping air bubbles indicating a defect.

Now Freon is introduced as a tracer into the closed thermostatic systems to be tested, after which the operator passes the nozzle of the detector over the soldered joints. Use of this testing procedure enables the company to locate leaks in about one-fourth the time it took with the former method.

is arranged so that the air discharges vertically downward over the prime surface coils where it is cooled and flows along the deck underneath the high floor wood gratings. The conditioned air then rises through the cargo at a relatively low velocity and is returned to the blower, which is usually suspended from the deckhead or ceiling.

For direct expansion systems, hot gas defrosting is normally employed. Where brine is used, warm brine is circulated through the coils when defrosting is required.

With banana cargo, a third type of system is preferable. This system is



identical to the diffuser system except for the means of air distribution.

A solid baffle or apron, as it is sometimes called, running from deck to deckhead, is constructed around the periphery of the compartment. Adjustable air outlets are provided both along the top and bottom of the apron which can be adjusted to suit the type of cargo being carried.

In this system, it is possible to distribute all of the air through the bottom outlets for under grating circulation, or through the top outlets for horizontal overhead distribution.

When bananas are carried, it is the usual practice to distribute all of the air underneath the floor gratings, permitting it to filter up at a low velocity through the bananas and back to the fan room through a high return opening located near the deckhead.

The homogeneous pre-cooled cargoes are usually carried at the same temperatures recommended for shore side storage. When it is necessary to carry mixed cargoes in the same compartment, a temperature must be determined which will be suitable for all of the perishables.

## MORE FLORAL CASES . . .

*Continued from page 33*

simplified installation and ready removal if necessary.

Steddom buys all his cases from Belsky Mfg. Co., Oklahoma City manufacturer of this type of equipment which fabricates the 6 x 6 x 3-foot units to Steddom's own specifications. Any standard self-contained floral display case, however, would adequately serve the same purpose.

A veteran of more than a dozen years in the florist business, Steddom buys his flowers wholesale and delivers fresh bouquets, all tied with ribbon and tagged with price, to each hospital case every day. Bouquets are priced the same as if sold in Steddom's downtown shop, ranging generally from \$1.50 to \$3, with an occasional \$5 design for the "carriage trade".

A wide variety of choice is offered among the floral selections displayed and stored in these cases, which are thermostatically controlled to a temperature of 42 to 45 F. The cases are designed for self-service, but do not dispense the flowers automatically.

The customer must open one of the two glass-paneled doors, withdraw the bouquet of his choice, close the door, and then pay the cashier the indicated amount.

As the boxes are serviced daily by the florist, old bouquets being replaced with fresh ones, no surplus stock of flowers is kept at the hospital.

To facilitate his record keeping, Steddom has devised a special form for his "Hospital Floral Service". This blank provides space for the name of the hospital, date, number

and price of bouquets and plants delivered, and the price of each item. Another section of this form lists the number of items sold and the number returned. This record is kept daily.

Proof of the popularity of Steddom's new service is the fact that the floral case at one hospital alone accounts for \$100 to \$150 in flower sales each month. Of this amount, of course, 20% goes to the hospital in which the case is installed, but this still leaves a tidy profit for florist Steddom.

Steddom, incidentally, has encour-

59-206 59-204 59-209 59-207 59-213 59-8428 59-8143 59-8128 59-8425 59-215 59-224 59-5825

CHROMIUM PLATED  
MATCHED DESIGNS

FIELD PROVEN THROUGH EXTENSIVE USE...

# NATIONAL LOCK REFRIGERATOR HARDWARE

PREFERRED BY MANY FOR A WIDE RANGE OF JOBS

- REACH-IN CABINETS
- BACK BARS
- BOTTLED BEVERAGE COOLERS
- MILK COOLERS
- DISPLAY CASES
- FLORISTS BOXES
- DRAFT BEER EQUIPMENT
- STOKERS
- COIN-OPERATED REFRIGERATED DISPENSING MACHINES
- LOW TEMPERATURE HORIZONTAL OR VERTICAL CABINETS
- MANY OTHER TYPES OF REFRIGERATING EQUIPMENT

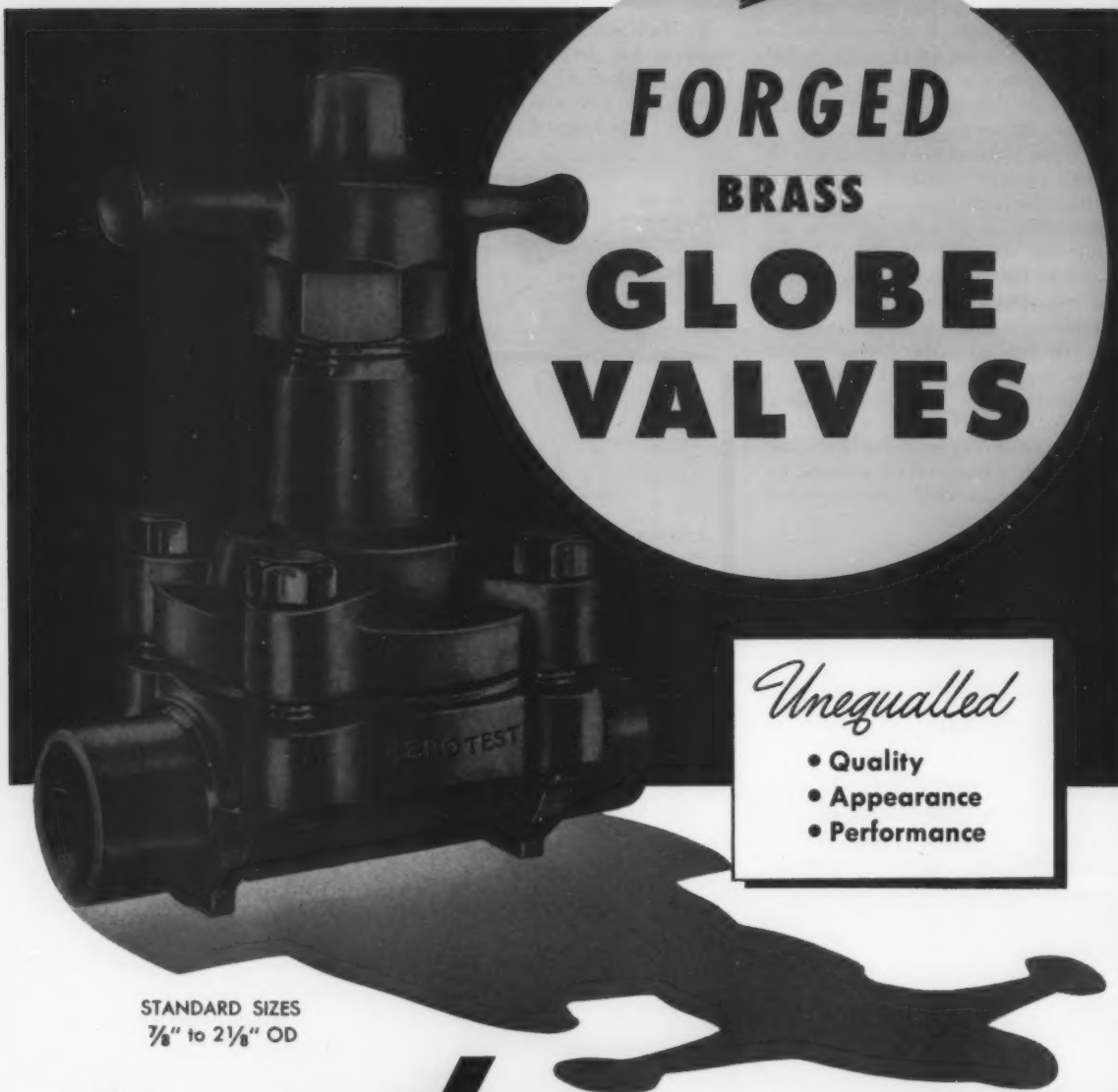
Ask your jobber for detailed information, including prices, of this attractive, durable refrigerator hardware for commercial and domestic applications. Prompt delivery can be assured on your orders.

NATIONAL LOCK COMPANY • ROCKFORD, ILLINOIS  
REFRIGERATOR HARDWARE DIVISION

*Another*

**KEROTEST**

*First!*



**FORGED  
BRASS  
GLOBE  
VALVES**

*Unequalled*

- Quality
- Appearance
- Performance

STANDARD SIZES  
 $\frac{7}{8}$ " to  $2\frac{1}{8}$ " OD

*At your*

**KEROTEST**

*Wholesaler NOW!*

AMERICA'S FIRST NAME IN QUALITY VALVES

**KEROTEST MANUFACTURING CO.**

PITTSBURGH 22, PA.

tered some opposition to his new merchandising scheme from the Northern Virginia Florists Association which has complained that some of the hospitals in which these cases are installed are public non-profit institutions, and that therefore the flowers are being sold in a restricted zone. The court, however, has denied the association's request for a preliminary injunction to prohibit the sale of the flowers.

In this connection one of the hospital officials pointed out that if the hospitals and Mr. Steddom were to be prevented from selling flowers through these self-service boxes such action would bring up the whole question of the legality of soft drink coolers and other vending machines in hospital locations. Although final hearing on this case has not been held, it would appear that if any self-service vending machine is lawful in such locations then a refrigerated self-service floral case also would be so considered by the courts.

While in this particular instance this novel flower merchandising scheme was initiated by a florist, there is no reason in the world why enterprising commercial refrigeration dealers and contractors in other communities shouldn't take the bit in their teeth, so to speak, by pointing out to some equally enterprising florist in their locality the profit possibilities inherent in such a plan.

This is just one more example of how the merchandisers of commercial refrigeration equipment can expand their area of service to the community . . . and make a few more sales for themselves in the process!

**\$15 PER SQ. FT. . . .**

*Continued from page 41*

first because it represented a good piece of business for him and second because he can use it as a "demonstrator" to convince other prospects that the installation of adequate refrigeration facilities can boost the business of even the smallest store. Proprietor Guy Farrell gives Quinn all the support he needs on this latter argument by pointing proudly to his own improved profit figures.

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**

## SERVEL "SCHOOLS" ON SUPERMETICS BEGUN

A training program designed to better acquaint commercial refrigeration servicemen with the operating features and maintenance of Servel Supermetic condensing units has been recently inaugurated by Servel, Inc., Electric Refrigeration Division.

A number of one-day meetings, sponsored by distributor and manufacturer customers, have been held in recent weeks in the Indiana, Illinois, Tennessee, Kentucky, Missouri, New York, Pennsylvania, Vermont, and

California territories. Others are being scheduled.

The service training sessions include discussions of internal construction of the Servel Supermetic, electrical characteristics, performance demonstrations, and how to select and apply the hermetic unit for the most satisfactory operation.

Servel factory representatives in charge of the meetings include Frank Jaeger, midwest service engineer, and James R. Fleming, eastern service engineer, assisted by the district managers in each territory.

## NEW UNIT EFFICIENCY *always* with **HM** CLEANABLE CONDENSERS

and the new two-stage design  
insures maximum heat transfer capacity



Seamless Copper Tubes  
Brass Headers Machined and Brazed

HM Cleanable Condensers can be maintained at "new-unit" efficiency and economy by regular and continued use of a standard cleaning tool. Water tubes are accessible at both ends—just loosen a few bolts and slide the end plates off—and there is nothing to obstruct the simple cleaning operation. Each quick cleaning operation takes only minutes, yet restores copper water surfaces to their original heat exchange efficiencies and adds months and years of the most efficient and economical service to the life of your refrigeration unit.

HM's new two-stage condenser design affords greater concentration of copper water-tube surfaces in the lower portion of the condenser. The smaller top water tubes allow ample refrigerant space, thereby eliminating resistance or pressure drop and affording the lowest possible head pressures. With this new construction, greatest possible heat-transfer values are effected.

JOBBERS in all principal cities  
carry HM condensers in stock.

**HM**  
*Halstead & Mitchell*

OFFICES: Bessemer Building, Pittsburgh 22, Pa.

# ANSUL OIL



## THE ALL-TEMPERATURE REFRIGERATION OIL

Recommended for air conditioning and refrigeration systems using standard refrigerants

ANSUL OIL is an All-Temperature Refrigeration Oil which conforms to the rigid wax-free specifications established by Research. It will not separate wax when mixed with a refrigerant (under specified conditions) and subjected to temperatures as low as SEVENTY DEGREES BELOW ZERO (Fahrenheit).

ANSUL OIL has been machine tested and approved for lubrication and wax-free characteristics in both high and low temperature installations.

Ansul Research was the first to recognize the critical need for an oil which would not only lubricate and protect moving parts but would also eliminate the persistent troubles which were traced to wax separation from oil-refrigerant mixtures.

ANSUL 150 OIL — The All-Temperature Refrigeration Oil — is sold by leading refrigeration wholesalers everywhere. (If you require a higher viscosity oil ask for ANSUL 300.)



**ANSUL** CHEMICAL CO.  
REFRIGERATION DIVISION  
MARINETTE, WISCONSIN  
Sulfur Dioxide, Methyl Chloride, Ansul Oil, Kinetics "Frosts"

ANSUL TESTED FOR  
✓ LOW MOISTURE  
✓ LOW WAX  
✓ HIGH STABILITY

## Useful LITERATURE

The publications listed below are available to readers without charge. Simply list on the postcard provided in this issue the key numbers of the items you wish to receive. Your requests will be forwarded directly to the companies concerned.

**413—Room Conditioners . . .** A table showing specific applications of room air conditioning in each season of the year is a feature of a new bulletin (G-2) made available by the air conditioning division of Remington Corp. Remington room air conditioners are illustrated and described. Relative merits of air-cooled and water-cooled models are discussed.

**414—Space Cooler . . .** A 4-page folder illustrating, describing, and listing specifications of the "Coldjet" space cooler for use in processing, chill, and storage rooms. Features of this new unit are listed and dimensional charts are provided. Available from Industrial Mfg. & Engineering Co.

**415—Vibration Control . . .** Typical installations in which cork may be satisfactorily used to control transmission of vibration and noise, installation data, and information on specification writing are given in a new illustrated bulletin (C-1) available from Korfund Co., Inc.

**416—Immersion Pump . . .** A specification sheet illustrating and describing a new miniature electric pump designed for use in air conditioning, coolant circulation, and general circulation purposes. Various applications of this unit are pictured. Available from Samuel S. Gelber Co.

**417—Coin Meter Selling . . .** "The Meter Plan for Selling Commercial Refrigeration" is the title of a 4-page folder designed by International Register Co. to help dealers employ coin meter merchandising methods with maximum effect. Suggests markets for this type of selling, and tells how to train salesmen in meter selling techniques. A special section is devoted to the technique of handling meter collections.

**418—Compressors . . .** This 6-page data sheet covers Servel's complete line of belt-driven compressors in four sizes for applications ranging from ¾ through 5 hp in requirements. Complete capacity tables and dimensional diagrams for each model are included, as well as a cross-section drawing showing construction details. Available from the electric refrigeration division of Servel, Inc.

**419—Air Conditioning Coils . . .** Several pages of technical data on coil selection, air volume, K factors, water and air friction, log mean temperature differ-

ence, heat content of air and properties of air and saturated water vapor are included in this catalog covering a complete line of direct expansion, steam, and water coils. Available from Kramer Trenton Co.

**420—Condensers and Evaporators . . .** A 4-page bulletin (BX-349) illustrating and describing a line of shell and finned tube condensers and direct expansion evaporators. Construction details are diagrammed. Available from Bell & Gossett Co.

**Flexible Metal Hose . . .** Full description and complete specifications of standard types of flexible metal hose in a variety of metals is contained in the new, colorfully illustrated, 68-page catalog just issued by Chicago Metal Hose Corp. Complete sections on expansion joints for piping systems, stainless steel and brass bellows, and various conduits and special assemblies of these components also are included. Write your request for this catalog on your business letterhead, indicating your title or function, and address it to COMMERCIAL REFRIGERATION AND AIR CONDITIONING, 1240 Ontario St., Cleveland 13, Ohio.

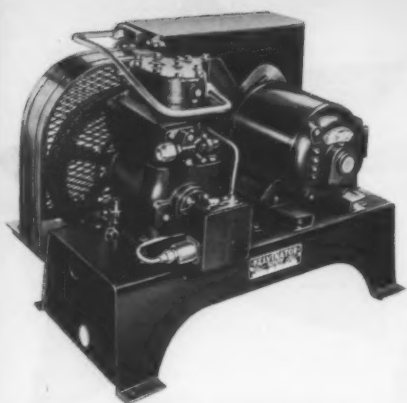
**421—Soda Fountains . . .** A new 24-page catalog covering a complete line of fountain and luncheonette equipment. All products are illustrated and informative cutaway diagrams are included. Typical installations are shown. Available from Stanley Knight Corp.

**422—Condensing Units and Condensers . . .** Two new data sheets, one covering "Blu-Cold" combination air and water cooled condensing units and the other covering the Lehigh water cooled shell and fin tube type condenser for general replacement use. Available from Lehigh Mfg. Co.

**423—Blower Units . . .** Capacity tables, capacity correction factors, and specification data, as well as complete dimensional charts and tables are featured in this 14-page bulletin (No. 486) covering the Kennard line of air conditioning blower units for comfort cooling or industrial applications. Available from Kennard Corp.

**BUY FROM YOUR REFRIGERATION WHOLESALE**

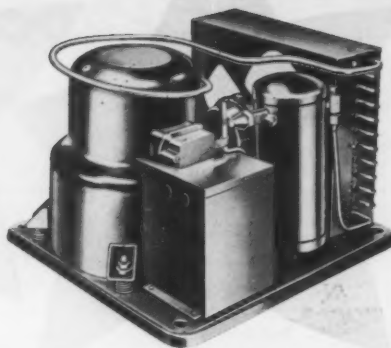




**Kelvinator Open Type Condensing  
Units (1/4 H.P. to 1 H.P.)**



**Kelvinator Water Coolers  
(Pressure and  
Bubbler Types)**

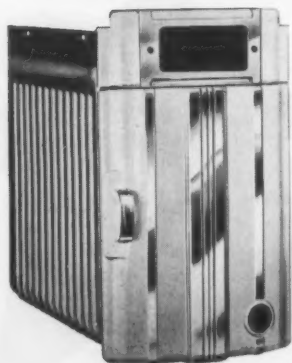


**Kelvinator Sealed Type Condensing  
Units (1/4 H.P. to 1/2 H.P.)**

# ***Kelvinator*** *extra sales through extra quality!*

Yes! Sales-minded refrigeration men know that every ounce of plus-quality spells greater profits. So, more and more, they're choosing Kelvinator—the name that *always* sells . . . *always* satisfies. See these quality products at your nearest

Kelvinator supply depot. All types and sizes are available for immediate shipment. Write, phone or stop in for quick service or helpful information. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



**Kelvinator Stainless Steel  
Evaporators**



**Kelvinator  
Silica Gel Driers**



**Kelvinator Compressors  
(1-6 H.P. to 5 H.P.)**

**DEPEND ON KELVINATOR FOR ALL YOUR REFRIGERATION NEEDS**  
**and AIR CONDITIONING • JUNE, 1949**

# NEW Products

For further information on any of these products, simply list on the postcard provided in this issue the key numbers of the items in which you are interested. Your requests will be forwarded directly to the companies concerned.

## Cooling Tower • • • • P-408

**Product:** Cooling tower in 7½ ton class.

**Manufacturer:** Marley Co., Inc., Kansas City, Kan.



**Features:** New tower has following features: compactness, quiet operation indoors or out, all-steel construction, bearing housing with grease-packed ball bearings, nail-less removable redwood filling, plus other advancements in cooling tower design. Towers are carried in stock and are available in immediate shipment. Bulletin AQ-49 gives complete rating data and describes the cooling tower fully.

## Cylinder Valve • • • • P-409

**Product:** Small refrigerant drum valve (Type 1281) with spring-loaded safety device for protection of those using small refrigerant cylinders.

**Manufacturer:** Superior Valve & Fittings Co., Pittsburgh, Pa.

**Features:** Incorporates a forged brass body and is threaded ¾-inch male pipe at the cylinder connection. The outlet connection is tapped ⅛-inch female pipe for use with a half union. Stem is machined ¼-inch square for wrench operation. Although incorporating additional feature of spring-loaded safety device,

valve is compact, overall height being 2-13/32 inches. Packing is of specially compounded material for use with all refrigerants. Safety device set to leak initially at 390/440 p.s.i.

## Upright Freezer • • • • P-410

**Product:** 15-cu. ft. upright freezer.

**Manufacturer:** United Refrigerator Co., Hudson, Wis.

**Features:** Dual doors open into two separate food compartments which have new DuPont finish which



is resistant to abrasion, acid, grease and chipping. External "thermo-guide" temperature indicator is standard on all freezers and shows box temperature without opening the doors. Compact in design. External finish is white DuPont "Dulux" baked enamel with chrome trim. Hermetically sealed unit is covered by new 5-year warranty plan.

## Display Case • • • • P-411

**Product:** Self-contained show case.

**Manufacturer:** General Refrigerators Corp., New York City.

**Features:** Case has a clear view Thermopane front and is available in

4, 5, and 6-foot lengths. Provides 1600 sq. in. of illuminated display front and 30 sq. ft. of shelf space. Unit housing is suitable for additional display space, or for location of scales or cash register.

## Evaporative Cooler • • • P-412

**Product:** "Sno-Breze" self-contained evaporative air cooler (Model 15 F 49PS) for applications where water connection or drain is impractical.

**Manufacturer:** Palmer Mfg. Corp., Phoenix, Ariz.



**Features:** Unit weighs 29 pounds and measures 24 inches wide, 23½ inches high. Adjustable side panels make it instantly fit all windows 24 to 36 inches wide. To install, set in open window and lower sash to cooler top. To operate, simply fill with water and plug in. Three-speed switch gives controlled air output up to 1500 cfm. Separate switch controls circulating pump and cooling system which operate from a 10-gallon reservoir. Will operate approximately 5 hours at high speed without refilling. If automatic water supply is desired, unit is equipped with removable chrome plug for installation of accessory float valve kit.

## Frozen Food Cases • • • P-413

**Product:** Frozen food merchandising cabinets.

**Manufacturer:** Haldorf Mfg. Co., Philadelphia.

**Features:** Model 7 PL (575 package capacity) is open-type, quick-service unit with six separate compartments separated by cold plates and equipped with removable baskets. Multiple plate glass along front edge gives display and visibility to contents. Superstructure and pictures in-

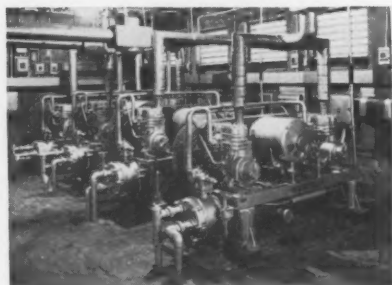
# QUIET AS A...



## EFFICIENT, ECONOMICAL MARLO COOLING TOWERS



*3 Marlo Cooling Towers on Roof*



*Compressor Room View*



*Air-Conditioned Lounge*

... the big difference that establishes Marlo Cooling Towers leadership is outstanding quality and performance. Quiet as a sleeping kitten — and just as smooth and prim in appearance ...

**QUIET** No roar of blower blades ... Just the pleasant purr of air movement.

**COMPACT** Easy to install, doesn't "hog the skyline".

**95% WATER SAVINGS** Water is used and reused — little is wasted. Observes all water conservation provisions.

Send for MARLO CT bulletin.

Three Marlo Cooling Towers like that above can be seen on the roof of the Turf Club at Galveston, Texas with interior scene shown of air-conditioned area. Compressor room view of Frigidaire units served by Marlo Cooling Towers.

Installed with Frigidaire equipment by ...

Moseley Refrigeration Co., Galveston, contractors.

**MARLO-HEAT TRANSFER**  
Since 1925

**Marlo** COIL CO. • 6135 Manchester Rd. • St. Louis 10, Mo.

directly lighted with fluorescent tubes.

Model 4818-2P (725 package capacity) is closed-type cabinet with roller-equipped vacuum-sealed lids of anti-fogging type. This unit also has illuminated superstructure, mirror, menu strips, etc., like open type. Both units use three-dimension natural color "Sell-A-Vision" pictures in superstructure. Both are finished in white enamel, with black recessed base, Copeland hermetic compressor mounted in base.

#### Rental Coin Meter • • • P-414

**Product:** Model M-21 heavy-duty coin meter particularly designed for use in rental of refrigeration equipment, air conditioning units, and similar appliances.

**Manufacturer:** International Register Co., Chicago, Ill.

**Features:** Extra heavy duty case of 1/4-inch malleable steel discourages tampering with meter and theft of coins. Solid steel door is equipped with a special, virtually pick-proof lock. Lock is backed up with heavy

reinforcing member to prevent lock from being driven through door. Meter will handle a wide variety of timings. Can collect a dime for every

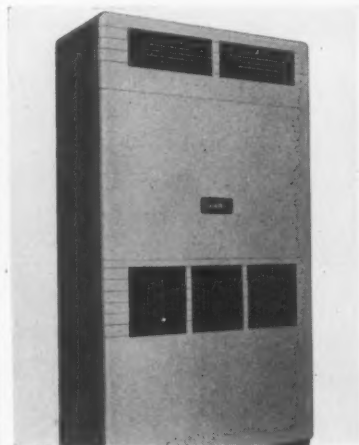


5 minutes, 10 minutes, etc. up to 60 minutes. Timings can be changed in less than 3 minutes by means of a screwdriver. Coin capacity is 250 dimes. Prepayment capacity is 1 to 23 dimes. Four 12-inch diameter mounting holes in back of case facilitate mounting.

#### Store Conditioner • • • P-415

**Product:** Improved line of 3 and 5-ton upright store conditioners.

**Manufacturer:** United States Air Conditioning Corp., Minneapolis, Minn.



**Features:** Re-engineered for silent, vibrationless operation and increased eye appeal. May be installed in the conditioned space or located remotely and connected with duct work. Completely packaged and ready for operation as soon as electrical, water, and drain connections are completed. Cools, dehumidifies, circulates, and filters air. Provision is made for mounting heating coil in plenum chamber. Metal cabinet finished in gray-green textured enamel.

**QUICKEE**  
WATERLESS  
HAND CLEANER

USE NO WATER!  
A TIME SAVER  
GOOD FOR THE HANDS

REMOVES GRASS, PAINT, GREASE, TAR, ADHESIVES, ETC. PRINTING INK AND OTHER GRIME...

**QUICKEE**  
Impulse Buying  
Makes Money for Dealers!

Every man who works with his hands—whether he is a mechanic or white collar chap who occasionally putters at home—is a hot prospect for **QUICKEE**, America's fastest-selling **Waterless Hand Cleaner**.

**QUICKEE** quickly chases paint, grime, grease, tar, adhesives, etc. A little dab, a quick wipe-off on a rag or paper towel and hands are clean enough for the dinner table.

More and more Dealers are finding that it is profitable to display **QUICKEE** in the compact counter display—because it's such a wonderful impulse item. Sold in 35c tubes and in cans from 13 oz. to 35 lbs. Push the profit line in '49—it pays. How about starting today!

**TUDOR** CHEMICAL SPECIALTIES, INC.  
NEW YORK 28, N.Y.



# The BIGGEST NEWS in Refrigeration



## The Sensational New

### McINTIRE D-C FILTER-DRIER

#### ● DOUBLE CAPACITY!

Has twice the moisture absorbency of any other drier, size for size. Stays on the line longer, has reserve capacity for any emergency. Saves call backs, saves cost.

#### ● EASY INSTALLATION ON THE LIQUID LINE

Dries effectively at refrigerant temperatures up to 150° F. No need to install in hard-to-get-at cold places.

#### ● FIRST-PASS DRYING

Absorbs and holds all moisture on contact. A single pass of refrigerant through D-C Filter-Drier is dehydrated to -60° dew point. No repeated warming of valves or cycling necessary. Wet systems restored to immediate operation.

#### ● PROGRESSIVE FILTERING

Large and efficient filtering areas assure clean systems and free flow.

The new McIntire D-C Filter Driers may be used with all refrigerants. They are available at leading wholesalers in factory-sealed and cartridge types. Try D-C Filter-Driers on a few jobs and you'll never again put up with the uncertainties and inconvenience of other types. Literature sent on request.

MADE by the  
MAKERS of



MOISTURE INDICATORS and  
MOISTURE CONTROL UNITS

**McINTIRE CONNECTOR COMPANY**

257 Jefferson St., Newark 5, N. J.

### Evaporative Condensers • P-416

**Product:** New line of evaporative condensers.

**Manufacturer:** Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.



**Features:** Available in 3, 5, 8, and 10-ton models designed for use with Freon, methyl, chloride, or any other common refrigerant. Housed in compact cabinet of furniture steel with spray section treated for rust resistance. Condensing coil is all

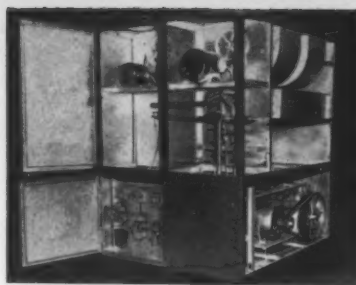
prime surface, constructed of continuous lengths of seamless copper tubing and pitched to allow rapid gravity flow of condensed liquid refrigerant. Carefully planned spacing of tubes insures even wetting and intimate scrubbing contact of air to copper valves for a high rate of heat transfer and minimized scaling. Redesigned blower blows dry air through coil instead of drawing moist air in. Spray nozzles designed to provide coarse spray and complete coverage of coils at low pressure. Special non-overloading pump.

### Heat Pump • • • • • P-417

**Product:** "Simpli-Cycle" combination heating and cooling unit for home and commercial applications.

**Manufacturer:** Simpli-Cycle Refrigeration Co., Brawley, Calif.

**Features:** Heats, cools, de-humidifies, purifies, and circulates air. Operation is simple. Heating and cooling valves are identified by a red or green color. By opening and closing these valves, regulating fan motor switch and compressor motor switch, and



setting the heating or cooling thermostat, the change is made from heating to cooling cycle. Equipped with "Par" S-500 compressor this unit produces 74,000 Btu at 35 F outside temperature on the heating cycle and 60,000 Btu at 109 F outside temperature on the cooling cycle.

### Food Freezers • • • • • P-418

**Product:** Food freezers in 15 and 30 cu. ft. sizes.

**Manufacturer:** Carrier Corp., Syracuse, N. Y.

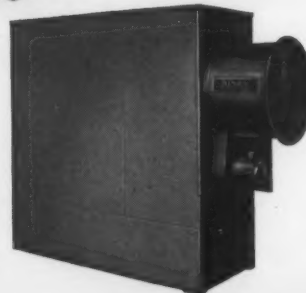
**Features:** Freezers are of upright reach-in design, and incorporate a

Where quarters are close . . . . .

## BINKS Horizontal Induced Draft Cooling Towers

create their own air movement!

Binks Type 2-D Horizontal Induced Draft Cooling Towers are standard where natural air movement is restricted. They create their own draft for efficient operation . . . can be operated indoors or outdoors. Engineered to give many years of trouble-free service, these modern, compact units are available in a wide variety of standard sizes and capacities. Provide maximum cooling at lowest possible cost . . . you can use the same cooling water over and over. Highly efficient for cooling circulating water for refrigeration and air conditioning condensers. Also suited to a wide variety of industrial processes where heat is liberated to circulating water.



Send today for

Bulletin No. 33 (describing single fan) or Bulletin No. 34 (describing twin fan) Horizontal Induced Draft Cooling Towers. Contain charts, dimensions and other data to help you choose the right Binks Type 2-D Units. State tower capacity required.

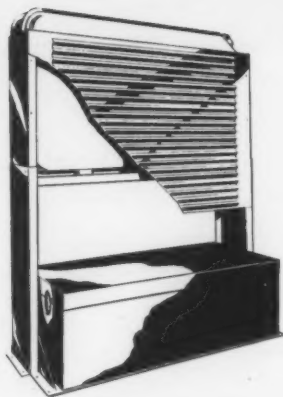
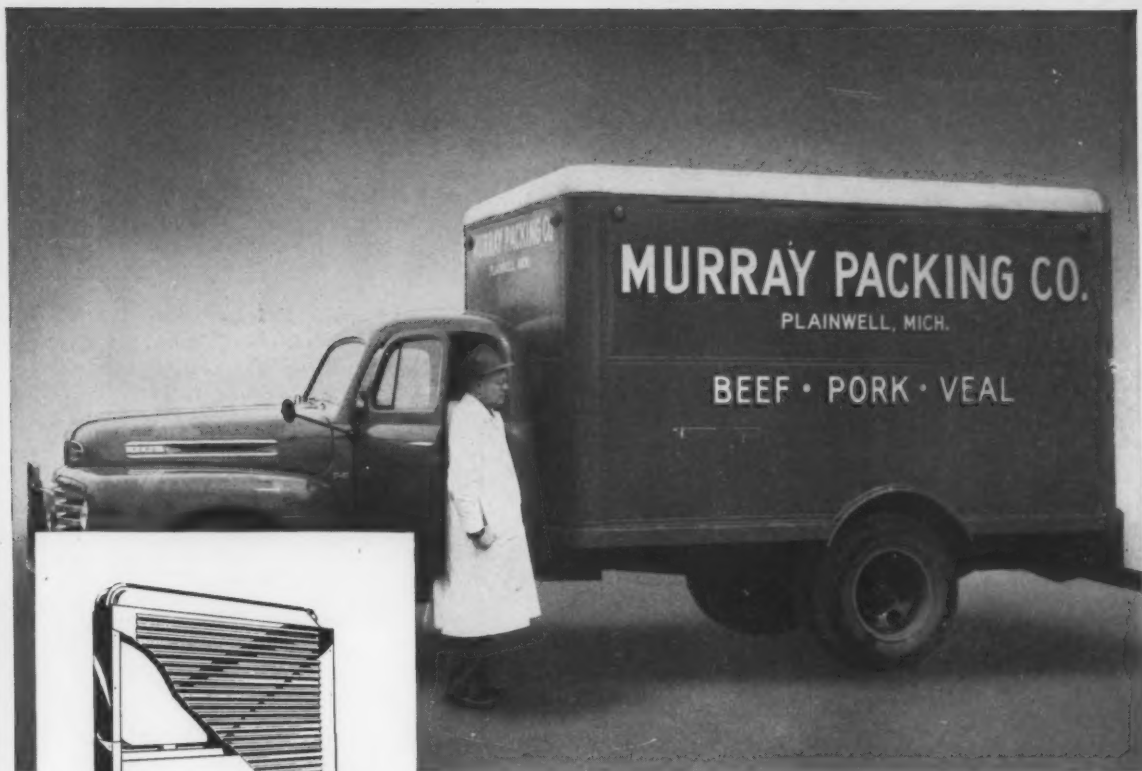
THERE'S A BINKS TOWER  
FOR EVERY COOLING JOB

# Binks

MANUFACTURING COMPANY

REPRESENTATIVES IN ALL PRINCIPAL CITIES ■ 3124-38 CARROLL AVENUE, CHICAGO, ILL.

# KOLD-HOLD *Pakage* TRUCK UNITS



## AS SIMPLE TO INSTALL

### AS 1-2-3

1. Cut two holes in the floor of the truck for air intake and discharge. Dimensions and measurements come with the unit, as well as complete installation instructions.
2. Push the unit into position over the holes and bolt securely into place. This is all the installation required.
3. Plug into 110V outlet. Twenty foot rubber covered cord is supplied with the unit. If desired, a connection box may be installed outside the body for greater convenience.

## *Prove a Profitable Investment*

FOR MURRAY PACKING CO.

IN THE TRANSPORTATION OF MEAT without SPOILAGE

Small fleet operators can now protect their perishable foods in transit easily and economically with the new Kold-Hold Pakaged Truck Unit. This is a compact, self-contained refrigeration system that you can quickly install in your own truck. It is a complete assembly of all units necessary to refrigerate a properly insulated truck body to a temperature of 45° to 50° for a day's run.

Paul H. Murray of Plainwell, Michigan has this to say about the Pakaged Units he installed in two of his trucks: "We find absolutely no deterioration of meat during transit. We have made savings by the use of the Kold-Hold Package Unit because our meat products reach the dealer in top condition. We are mighty well pleased with the results."

The Kold-Hold Package Unit will give you dependable, low-cost refrigeration, will help you win more customers and increase your profits. Send today for complete information.

# KOLD-HOLD

Jobbers in Principal Cities

**PROCESSING** **TRANSPORTATION**  
protects every step of the way

**STORAGE**

KOLD-HOLD MANUFACTURING COMPANY - 503 E. HAZEL STREET, LANSING 4, MICHIGAN

and AIR CONDITIONING • JUNE, 1949

Custom-built for the  
Trailer Industry

...**SANITARY'S**

**NEW FULL LINE SERVES  
ANY HOUSING REQUIREMENT**



**MODEL  
TE62**

Width, 23½", depth, on body, 20"; depth, over hardware, 22¼"; height, 50½". Net food storage, 6 cu. ft.; shelf area, 12.5 sq. ft. Nine pounds of ice per freezing. Even-point control. Attractively styled cabinet sealed against moisture.

Model TE-62 is one of many trailer refrigerators in the new **SANITARY** line. Like all the others, it offers gleaming good looks, capacity combined with compactness, engineered strength to absorb shock, and low-cost service. It is a completely enclosed unit that doesn't require a cabinet recess. You can easily sell it for use in apartments, homes, offices or trailers. Write for complete details.

**SANITARY REFRIGERATOR CO.**  
FOND DU LAC, WISCONSIN

simplified inventory arrangement called the "Stock-Aide," comprising bars and tabs in front of shelves to tell contents of each; bars hold food packages in place when shelves are filled. White enamel cabinets are of all-steel construction, with 6" fiber-glass insulation in 30 cu. ft. unit and 5" in 15 cu. ft. unit. Dial control simplifies temperature selection. Compressor, condenser, refrigerant control and evaporator plates are assembled into one hermetically sealed unit. Capillary tube regulates flow of refrigerant. Freon-22 is used.

can be used together with conventional pressure button. New units have stainless steel tops, drain and bubbler assembly with anti-splash guard; water flow button requiring only slight pressure. Water flow is automatically regulated to provide steady stream regardless of outside water pressure variations of as much as 20 to 80 lbs. Coolers available with hermetically sealed condensing units using either air-cooled or water-cooled condensers and can be equipped with transformers for special electrical connections.

#### **Water Cooler • • • • P-419**

**Product:** New 6-gallon capacity water cooler.

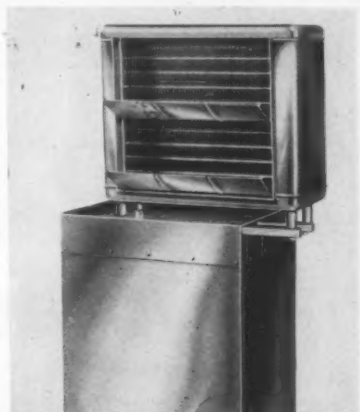
**Manufacturer:** Temprite Products Corp., Detroit, Mich.

**Features:** The two new 6-gallon units will be companion models to Temprite's heavier duty 10-gallon water coolers. Smaller units deliver ample capacity to meet needs of average light manufacturing plants and most offices, stores, etc. Optional equipment is a new stainless steel foot pedal type flow control, which

#### **Truck Refrigeration • • P-420**

**Product:** Model V-75-A automatic, self-contained refrigeration unit for medium trucks.

**Manufacturer:** Freezerver Products, Inc., Lansing, Mich.



**Features:** Completely self-contained. Maintains a thermostatically controlled temperature of 40 F in any insulated truck body. Dual power drive, combining both a gasoline engine and an electric motor, operates independently of the truck motor, powering the unit for on and off the road service. Completely protected from dust and dirt. Utilizes only 18 cu. ft. of space and weighs less than 400 pounds. Readily installed and does not mar truck appearance.

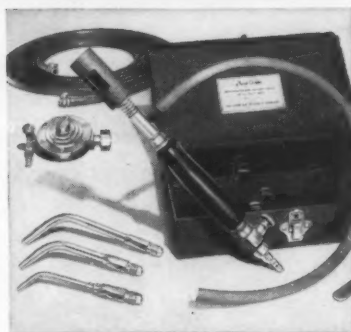
**For Locating Leaks • Soldering • Heating • Brazing**

### *Prest-O-Lite* Trade-Mark **REFRIGERATION OUTFIT**

**ALL-PURPOSE**—Handiest kit yet for installer and service man. 3 stems for soldering, heating, and brazing. Detector for locating non-combustible refrigerant gas leaks.

**QUICK**—Always ready for immediate use. Torch or detector lights instantly. No pumping, priming, or warmup. Detector locates exact source of any non-combustible halide refrigerant gas leak in seconds.

**DEPENDABLE**—No delicate parts to get out of order. Unaffected by drafts or weather.



Outfit illustrated. . . . . \$22.50

**CONVENIENT**—Compact and light. Easy to use anywhere.

• See your jobber or ask us for further information. The Linde Air Products Company, 30 East 42nd Street, New York 17, N.Y. In Canada: Dominion Oxygen Company, Limited, Toronto.

"Prest-O-Lite" is a trade-mark.

#### **Self-Service Case • • • P-421**

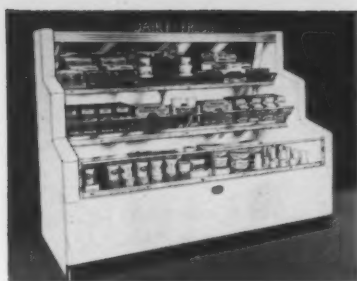
**Product:** Refrigerated triple-deck merchandising case.

**Manufacturer:** Federal Refrigerator Mfg. Co., Waukesha, Wis.

**Features:** Removable ends make possible joining of cases for continuous display. Porcelain front with stainless steel trim. Three full size refrigerated decks offer a total of 33

**Order from your local Jobber**



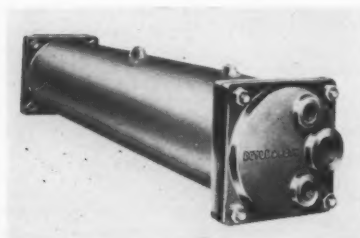


sq. ft. of refrigerated display area for self-service merchandising. Price tag moulding and glass guards provided on all three tiers. Top tier has mirrored background. Fluorescent lighting. Overall dimensions are 76½ inches long (minus ¾-inch end sections) 65 inches high, and 42 inches deep.

#### Condensers • • • • • P-422

**Product:** New line of "Junior Freon Condensers" for air conditioning and refrigeration and applications.

**Manufacturer:** Doyle & Roth Mfg. Co., Newark, N. J.



**Features:** Designed for ranges between 1½ and 25 tons. Tubes rolled into reamed and serrated holes, insuring leak-proof construction. Tubes are cleanable and easily replaceable. High heat transfer offered by "lo-fin" tube. Pump down capacity for refrigerant storage eliminates need for a receiver. Design affords water economy consistent with efficient operation.

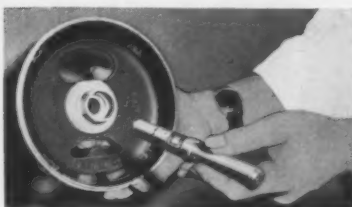
#### Motor Tool • • • • • P-423

**Product:** Tool for performing in one operation the removal of worn sleeve bearings from motor endplates and the insertion of new bearings.

**Manufacturer:** Wagner Electric Corp., St. Louis, Mo.

**Features:** Consists of steel rod accurately finished to accommodate precision bored bearings on one end

and unbored bearings (for undersize shafts) on the other. A central shoulder separates the two ends. As the new bearing is inserted the old bearing acts as a pilot, assuring correct alignment of the new bearing. No



reaming is necessary. Tool available in four sizes for motors with finished bearing sizes of 0.655, 0.751, 0.812, and 1.062 inches. Photo shows tool with new bearing and spacer in position.

#### TEXAS JOBBER MOVES

Texas Refrigeration Supply Co., Forth Worth wholesaler of refrigeration equipment, parts and supplies, has announced removal of its headquarters to a new and larger store at 301 West 13 St.

HOW WOULD YOU  
SELL REFRIGERATION  
TO THE PROSPECT WHO SAYS

I NEED NEW  
EQUIPMENT  
BUT I DON'T HAVE  
THE MONEY  
FOR IT

He is in the habit of paying his suppliers daily....



As a result, at the end of the month there is not enough left to pay large down payments and lump sum monthly payments.

Your Answer Is  
**THE METER PLAN**

OF  
DAILY SAVINGS

Your Customer  
Deposits  
Just a Few  
Quarters  
a Day.



**METER-MATIC** COIN METERS ARE:

- LOW IN PRICE
- SIMPLE TO INSTALL
- FULLY GUARANTEED



Meter-Matic DM6 Meter  
Two Door Case

MAIL  
THIS  
COUPON  
TODAY

INTERNATIONAL REGISTER CO.  
2626 W. Washington Blvd.  
Dept. 69-M, Chicago 12, Ill.

Please send me FREE: ☐ Meter Catalog  
☐ Meter Plan for Selling Commercial Refrigeration.

Company..... Name.....  
Address.....  
City..... Zone..... State.....



## Over the COUNTER

### Analyze Your Credit Risks

**W**HEN the supply of goods begins to catch up with demand a buyers' market becomes established. The consumer at this point is more cautious in his buying habits, looking around for the best merchandise at the lowest prices, bargain hunting.

*If the problem for business people selling in a buyers' market ended when the sale is made, the situation would not be too difficult to handle. Unfortunately, however, the problem often only takes shape with the sale, continuing thereafter from a credit and collection standpoint which often*

*becomes a far more difficult problem than the sale itself.*

Collection of accounts has been growing steadily more difficult. The consumer is taking longer to pay his bills. This general slowing up of consumer collections is reflected back through the business trading levels to the original manufacturer, sometimes even back to the supplier of the basic raw materials for production.

Consumer collections in the refrigeration industry are perhaps abnormally inclined to rapid slowing up, particularly on sales made by small

organizations or one man operators without special credit and collection personnel.

Many servicemen and small dealer organizations continue to keep their level of sales far above normal. Add to this the increased demand for service and installations, particularly during the warm months, and you find the small operator head over heels in work, taking time out to eat and sleep, but with little or no time left for making out bills or attempting to collect accounts owed by slow paying customers. Undoubtedly many consumers deliberately take advantage of this situation knowing that the service man or dealer is loaded up with work.

*At this high point in the inflationary price spiral many customers just cannot stretch their available cash far enough to properly meet all their obligations. Many consumers in business, such as grocers and butchers, who in turn extend credit to their trade, have trouble paying their bills because their own collections are becoming slower. And so it goes down the line.*

Because it is a known fact that such a situation exists, every business man should carefully study this situation as it affects his own business. Take steps to speed up and intensify collection activities.

*This is also a time to exercise more thought and consideration to future extension of credit. Examine the paying habits of your customers more carefully. Find out, if possible, the financial condition of your customer. Find out how he is paying accounts owed to others; find out just what program he follows to collect money others owe him.*

We do not want our readers to get the impression that we advocate the elimination of risk credit, for every business must handle a certain amount of this type business in order to grow and expand. We suggest, however, that every business man take time to more closely follow collection of slow accounts and to more closely analyze the financial position of his customers.

### FOR SOUND, HELPFUL ENGINEERING ADVICE

See Your

## REWA WHOLESALER

When you need advice on products or installations, you'll find your REWA wholesaler expertly equipped to supply time-cutting, money-saving advice.

Next time you have a hard-to-lick problem, take advantage of your REWA wholesaler's years of valuable, practical experience.

Consult him often for his assistance in improving your job results.

**Wrong Guesses Cost You Money. Take Time to be  
Sure . . . See Your REWA Wholesaler.**

**180 MEMBERS  
MAINTAINING  
OVER 300  
CONVENIENT  
OUTLETS**

**BUY FROM A**



**MEMBER**

H. S. McCloud, Executive Secretary

920 East McMillan St., Cincinnati 6, Ohio

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**

## IT'S A LONG HAUL . . .

Continued from page 35

with his father the sales and administrative functions of the firm.

The company carries a minimum of \$160,000 worth of stock at all times, and in order to keep turning over this volume of merchandise at reasonable intervals the firm relies rather heavily upon its advertising and promotional efforts. For instance, Flagg's spends about \$450 per month in advertising in the Bangor Daily News. Also, the company makes good use of imprinted pencils and bottle openers in its endeavor to keep its name continually in the minds of its customers. Pairs of playing card decks imprinted



with "Mr. and Mrs." were distributed to proprietors of some 1300 establishments patronizing the Flagg firm.

For its service operations the company maintains a staff of six light trucks and two passenger cars. This gives each man a vehicle of his own which is kept stocked continually with \$700 to \$800 worth of equipment and supplies. One heavier truck is utilized for the delivery of unitary equipment.

The stock of each serviceman's truck is replenished after each trip. A monthly checkup of each truck is made to insure that each is kept completely stocked. This work is the responsibility of a full-time stock clerk. The full importance of this close control of truck stocks can be readily understood when you realize that it is one thing for a serviceman to return to the shop for a missing part or tool when he is two miles away, and quite another thing when he is 200!

For this same reason, Flagg makes

it a "must" that each serviceman call in to the firm's headquarters after completing each service call so that he may be assigned any other calls which have been received from that same area, or between that location and Bangor, so that the men will do a minimum amount of "deadheading".

This procedure helps push the company's telephone bill up over \$400 each month, but under the circumstances Flagg has found that it definitely pays out in the long run.

Another thing which adds to the company's monthly phone bill is Rosco Flagg's insistence upon personally following up on every customer to whom the firm has sold a piece of equipment or on whose equipment major repairs have been effected.

"I do this," he explains, "simply as a good will gesture. But," he adds wryly, "it sometimes takes a lot of courage, for if a man's equipment isn't functioning properly he's pretty apt to tell you about it—but emphatically!"

Naturally, inasmuch as the mileage involved in many of Flagg's service calls is so great, it is definitely to the firm's advantage to do an extra-good

## PERMAGUM



THE PERFECT READY-TO-USE  
SEALING COMPOUND

For Refrigerators, Freezers,  
Ice Cream Cabinets

2 1/2 pound package **85¢**

BUY IT FROM YOUR WHOLESALER

Distributed by  
**VIRGINIA**  
*Smelting Company*

West Norfolk • New York • Boston • Detroit

## We've Got a...



EVERYTHING FOR THE COMMERCIAL OR INDUSTRIAL  
ELECTRIC REPAIR SHOP!

WRITE FOR FREE, 238 PAGE ILLUSTRATED CATALOGUE  
(On Your Letterhead, Please)

**COMPLETE-READING ELECTRIC CO., INC.**

104 E. JEFFERSON ST., CHICAGO 6, ILL. TELEPHONE: CENTRAL 6-5390

"Your Best Source of Supply"

## Slash VALVE INVENTORY COSTS UP TO 900%



GENERAL CONTROLS engineering offers tremendous savings in inventory investment, stock space and handling costs.

THE NEW SELECTIVE CAPACITY CARTRIDGE PROVIDES INSTANT SIZING ADJUSTMENT

### COMPARE THESE FACTS

**ORDINARY VALVES**... Separate valves for each back pressure or suction temperature range. Separate valves for each capacity size.

**GENERAL CONTROLS V-200 VALVES**—One valve for ALL back pressure or suction temperature ranges. One valve with selective cartridge for full range of capacities.

For Freon, Methyl Chloride and Sulphur Dioxide

For Full Capacity Range in each body size at all back pressures with any one refrigerant

### ONLY ONE VALVE REQUIRED FOR COMPLETE INVENTORY

Nationally Distributed by Refrigeration Wholesalers • Request Literature

### GENERAL CONTROLS

Manufacturers of Refrigeration Equipment, Freezers, Condensers & More Controls  
FACTORY BRANCHES AND DISTRIBUTORS IN PRINCIPAL CITIES

job of installing equipment in the first place, thus eliminating insofar as possible any unnecessary callbacks.

For instance, the firm makes a practice of deliberately oversizing installations so that they will be sure to have ample reserve capacity. Also, extremely close attention is paid to the balancing of compressors and lowsides. On most of its walk-in freezer jobs the company uses heavy duty plate type evaporators so as to have maximum holdover protection for emergency use in case of power failure.

### Careful Installation Pays

As a result of such extreme caution in its installation procedures, the company now can point to many of its jobs which have been in operation as long as eight or nine years without a single service call. To make sure that all these principles are strictly adhered to, Flagg calls periodic meetings of his entire service crew to jack them up on their installation and service procedures.

Purely for its own benefit, the firm operates a form of preventive maintenance service without any charge to the customer. It functions in this way.

Any time a man has a service call in an outlying community he makes it a practice to drop in on the company's other customers in that town just to check over their equipment, oil the motors, and perform any other minor maintenance service which might be indicated. Not only does this free service engender an incalculable amount of customer good will, Flagg has found, but it actually saves the company money by preventing a good many avoidable equipment failures.

Quite naturally, even in spite of all these precautions, it is still necessary for the company to protect itself in some way against possible financial loss on some of its remotely located installations.

### Users Are Educated

It used to be the company's practice to add a flat \$25 service reserve to the price of each such job, but this practice now has been discontinued. Instead, each job now is figured individually and an arbitrary figure then is added to the sales cost to cover any possible contingencies. Obviously, the more complicated the system the higher this charge must be.

Still another important part of this protection program, Flagg points out, is the continuing instruction of customers in the proper operation of their equipment. This educational effort also has been a big factor in eliminating unnecessary callbacks, he claims.



### THE NEW FEDERAL Triple Deck MERCHANDISER

For Single or Continuous Display of Dairy Products, Produce or Meats.

Small, Medium or Large Stores — all are prospects for this new Federal Triple Deck Merchandiser

### ★ Federal SELF-SERVE

FEDERAL MODEL 3307, 7 FT. LONG  
Ends removable for endless display

Ideal for the merchant who wants to sell more perishables per square foot of floor space. Thorough Refrigeration . . . Fluorescent Lighting . . . made with easy to reach shelves . . . clad with gleaming white porcelain.

This is another Federal Case, typical of the rapidly expanding Federal line.

Some desirable territories available on our complete line . . . Write for details.

**Federal REFRIGERATOR MFG. CO.**  
COMMERCIAL REFRIGERATORS ★ WAUKESHA, WIS.

**B**OB GRAVES, popular head of Graves Refrigeration, Inc., Atlanta parts wholesaler, has been getting a good many "orders" recently that he hasn't been able to fill.

It all seems to stem from the sign "Graves Refrigeration", which the company has on the back of its building in letters three feet high. Somehow, this seems to have become confused in the minds of some persons with "Graves Registration", the point to which bodies of G. Is killed in World War II are sent for re-distribution.

Actually, there is such a bureau at Conley Depot, some distance out of town. But mail and phone calls kept coming to "Graves Registration" at the "Graves Refrigeration" address.

"The family name seems to go back as far as an English admiral who got beat in Chesapeake Bay about 1775", Bob Graves says, "but maybe we should change it to something more cheerful, such as Glad, or Good."



## CONTRACTOR NEWS

### CHATTANOOGA MEN TO SEEK LICENSE CODE

*Continued from page 38*

plumbing, often carries explosive gases—and all too often this equipment is installed in a most haphazard manner. It is dangerous, not only to food stored in refrigerators, but from a standpoint of possible explosion and fire.

"Responsible contractors don't want that to happen. We want to clean up the matter. The sooner a safe code is adopted, the better off the public will be. Tennessee is fortunate in already having its unfair sales act. I hope it will take steps to further protect the public."

The Chattanooga association is now assembling data and information to determine the seriousness of the situation in that city. According to J. B. Corlew, president of the group, "some refrigeration systems in Chattanooga probably still have mixtures of Freon and methyl chloride which was added during the war by irresponsible and unqualified mechanics, due to the shortage of Freon."

In connection with the proposed statewide meeting of refrigeration contractors, Corlew said that contractors from nearby states would be welcome to attend. Date of the convention will be announced as soon as

necessary arrangements have been made.

"One of the things to be discussed at the state convention will be the Tennessee Unfair Sales Act," Corlew said. "This law was passed by farsighted legislators in 1937 to protect the public from monopolistic practices, but has never been enforced in the refrigeration industry. A trade survey of the cost of distribution is now underway, and the protection provided under this law will be exercised."

Officers of the Chattanooga association are: J. B. Corlew, of Corlew Engineering Co., president; Clair E. Smith, of Southern Blowpipe & Roofing Co., vice president; Abe Prebul, of Prebul Refrigeration Co., secretary-treasurer; and H. C. Evans, of Chattanooga Refrigeration Co., sergeant-at-arms.

Directors, in addition to the officers, are: B. C. McCall, General Equipment Co.; Walter Young, Jr., of Walter Young, Jr.; C. C. Campbell, of Chattanooga Scale & Fixture Co.; and Edwin W. Lawson, of Lawson Refrigeration Service.

### FLORIDA CONTRACTORS AFFILIATE WITH NARC

The National Association of Refrigeration Contractors has added another local association to its membership roster, this one in Miami, Fla. A group of Miami's leading contrac-

tors met with NARC president H. E. Wheeler and other NARC representatives in that city recently, and shortly thereafter made formal application for affiliation. The application was formally approved at the recent NARC quarterly board meeting in Chicago.

Officers of the local association, to be known as the Air Conditioning & Refrigeration Association of Florida, are: Paul E. White, president; R. Ernest Nitzsche, vice president; Harry C. Higgins, treasurer. Headquarters of the group are at 1168 N. W. 41st St., Miami 37, with Howard S. Davis, executive secretary, in charge.

### ICE CREAM COMPANY FINED \$5,000 FOR "KICK-BACKS"

*Continued from page 38*

Bowers, assistant attorney general of the state, further alleges "said acts of defendant were not for the purpose of meeting in good faith, or otherwise, any lawful competitive price or condition then existing within the said County of San Joaquin or anywhere else within the State of California."

### NEW AIRTEMP OUTLET

M & R Engineering Co., 4018 Church Ave., Brooklyn, N. Y., has been appointed dealer for Chrysler Airtemp refrigeration, air conditioning and heating products in the Brooklyn area. Emil J. Merenda and Theodore A. Reina head the company.

### CLEVELAND AIRTEMP DISTRIBUTOR HOLDS WEEK-LONG "TRADE SHOW"



Something different in the way of a "trade show" for dealers, contractors, architects and engineers was staged recently by Temperature Equipment Corp., Cleveland distributor for Chrysler Airtemp equipment. The show was a week-long event, with each day set aside for special product meetings on one of the lines handled by the company, including Airtemp packaged and central station air conditioning equipment and Fedders-Quigan room air conditioners and water coolers. The photos above show visitors inspecting some

of the equipment displayed. At left are N. J. O'Bryan, sales engineer, Temperature Equipment Corp.; E. D. Smith, engineer, Cleveland Worst Mills; and L. E. Grether, regional manager, Chrysler Airtemp Sales Corp., Cleveland. At right: William Neiheiser, chief engineer, Temperature Equipment Corp.; V. C. Dee, engineer, Gorman-Lavelle Plumbing & Heating Co., Cleveland; and Paul H. Dow, sales manager, Temperature Equipment Corp., talks over the fine points of one of the pieces of cooling equipment on display.

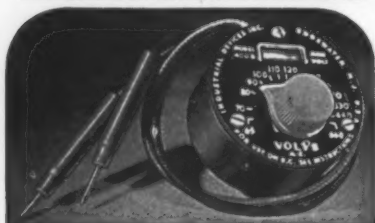
**ANOTHER FIRST FOR  
LA CROSSE  
THE NEW  
GLASS CHILLER**



- 2 separate compartments each 4-cubic ft. capacity.
- Each compartment will hold about 200 heavy mugs.
- Fast, easy operating top sliding doors insures minimum cold spillage.
- Fits under standard 42" bar.

Again, La Crosse leads the field with this new mechanically refrigerated Glass Chiller unit. Especially designed for use where present legislation prohibits wet refrigeration of glasses.

**LA CROSSE COOLER CO.**  
2809 Losey Blvd., So., La Crosse, Wisconsin  
Export Representatives: Melvin Pine & Co.  
Cable address: Eximport  
80 Broad St., New York 4, New York



**MINI-VOLT**

Instantly read voltages right off dial, 65 to 660 v. A.C. Also D.C. Virtually burnout-proof. Lamp guaranteed for 10,000 hours. Plastic case, 12" flexible test leads. And only \$2.75 list!

• Not only distinguishes between 110, 220 etc. volts, but measures line voltage close enough to show up 3 or 4 volt drop between meter and load terminals on 110 v. line.

• No refrigeration serviceman need now be without definite knowledge of whether faulty operation of motors, magnetic valves, etc. is due to improper terminal voltage.

• Checks for blown fuses, accidental grounds, circuit continuity. Useful for electrical troubleshooting in general.

• Not subject to error of "false indication" common to neon test lamps.

It's a "must." Saves time, money, life and limb! Order from supplier, or from

**INDUSTRIAL DEVICES, INC.,  
EDGEWATER 11, N.J.**

# California Contractors Block Repeal of Dairy Selling Law

California refrigeration contractors recently won another round in their long battle with ice cream manufacturers and distributors over the sale and maintenance of refrigeration equipment. Their most recent victory came when the California Senate Committee on Agriculture, by a vote of 7 to 4, refused to report Senate Bill No. 393.

This bill, sponsored by the ice cream industry and the state Department of Agriculture, would have repealed a provision of the state agricultural code which reads:

"The selling of any equipment by a distributor or ice cream manufacturer to any customer or individual at a price other than the printed retail list price of the equipment . . . shall be prohibited."

## Contractors Oppose Repeal

This provision was among certain amendments to the so-called "ice cream code" which were adopted two years ago by the California legislature, and which were instigated to a large degree by the Refrigeration Contractors Association of Northern California. Senate Bill 393 was opposed by the association through its public relations committee during hearings on the measure. The committee also represented contractor groups in Los Angeles, San Diego and Fresno.

If the bill had become law, it would have permitted ice cream companies "to return to the all too familiar practice of disposing of refrigeration for no other purpose than to control ice cream business", in the words of Z. E. Jones, executive vice president of the Northern California association.

The reason advanced for the proposed repeal, according to Jones, was that it has been impossible to secure printed retail list prices on commercial refrigeration lines from the industry, and hence the law could not be complied with or enforced.

To combat this objection, the contractor association has undertaken to work out a mark-up formula to be written into the bill and a provision

that ice cream companies confine their repair and service work to their own rental equipment or to that being sold under conditional sales contracts. The job of compiling and tabulating the price data is now under way, and when completed the information will be filed with the Bureau of Milk Control of the state Department of Agriculture, to help facilitate enforcement of the present law.

## Industry Data Compiled

As part of its effort to prevent repeal of the existing regulation, the association assembled state-wide statistics with which to indicate to legislators the size and importance of the industry. Data secured from this survey were presented at a later meeting between representatives of the contractor groups and the senate committee on agriculture, held in Sacramento. A summary of the data follows:

	Total	Average
Number of contractors reporting	111	
Numbers of employees	1,758	16
1948 payroll	\$6,494,253	\$58,507
1948 business	\$29,484,133	\$265,623

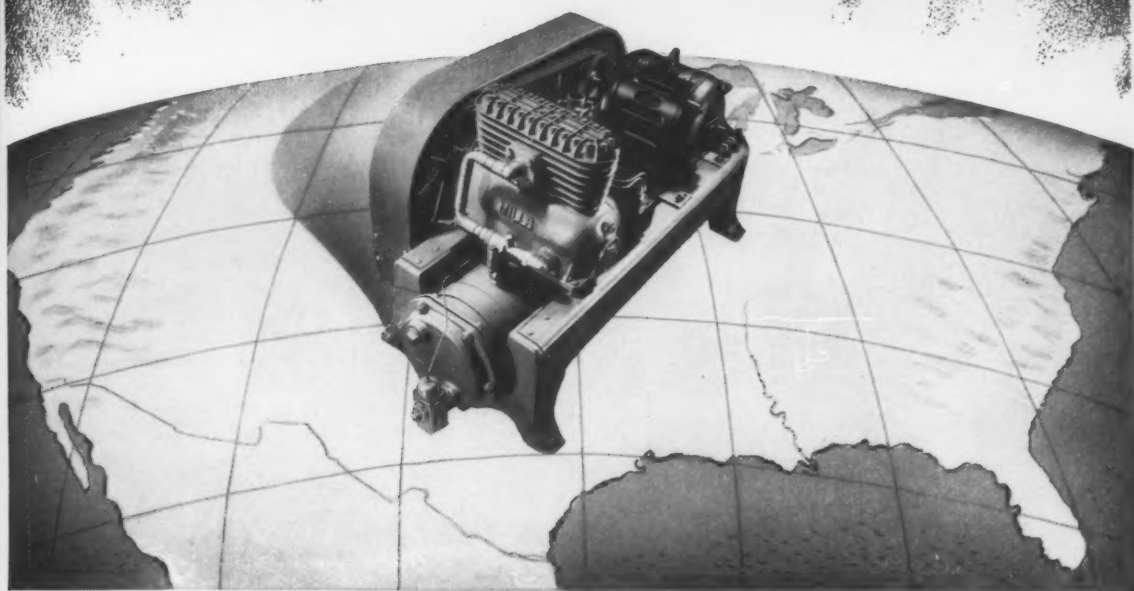
## Provisions Of Law

In addition to forbidding manufacturers and distributors of ice cream from selling new equipment to customers at other than the equipment manufacturer's retail list price, the "ice cream" law requires that terms must be the same as those recommended by the manufacturer of the equipment.

It also requires that conditional sales contracts on equipment sold to retailers must provide for a payment of at least one-third cash and the balance to be paid in 18 months or less. Contract prices must include interest at current rates and installation and maintenance for the life of the contract.

The law does not prohibit rental of refrigeration equipment which is "reasonably necessary for the preservation of frozen products" provided there is "reasonable compensation."

**WHEREVER THERE ARE REFRIGERATING,  
COOLING and Air Conditioning Systems**



*you'll find..* **MILLS**  
**COMPRESSORS AND  
CONDENSING UNITS**



*Write for new 60-page Catalog  
204-1. A handy guide to help  
you in Condensing Unit selec-  
tions.*

Widely used and widely proved—MILLS Condensing Units meet operating requirements of economy and long-life dependability.

They provide sustained maximum output per size and dollar. Quietness is a result of correct design and precision manufacture. B.T.U. ratings are accurate and reliable.

MILLS Compressors and Condensing Units are made in standard capacities to meet all requirements within their range— $\frac{1}{4}$  to 10 H.P., air-cooled, water-cooled and combination air- and water-cooled types.

## JOB PROPOSAL . . .

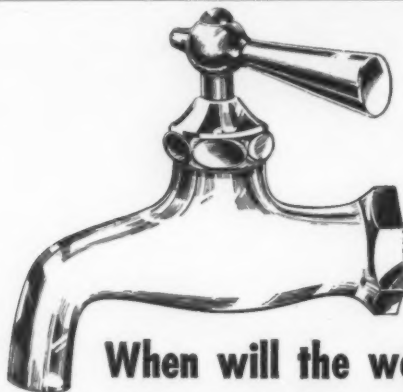
*Continued from page 46*

cially if you are able to "sell" him on your installation and service facilities, price doesn't loom so importantly in his mind.

The fact that you are able to offer him undivided responsibility, the company has found, helps to land the whole job in some instances where otherwise you might come in for only a part.

As was mentioned earlier in this article, the elaborateness and extent of each proposal varies with the individual job. On the smaller jobs, the technical part of the presentation may be only one page. But the same procedure is followed on all proposals—the company "sells" itself and its installation and service facilities on all of them.

The company has found that, whatever the size of the job, this practice definitely pays off and helps create repeat business for both sales and service departments.



## When will the well run dry?

Water sources are diminishing . . . in hundreds of communities all over America. And in hundreds of others, water disposal has become an awful headache. Many cities have ordinances which prohibit or curb the use of large quantities of water for air conditioning. That could be a tough situation for a lot of dealers . . . if it weren't for usAIRco's Refrigerated Kooler-air.

That's the all-in-one-unit "central plant" that uses so little water that it will never get anyone legislated out of business. It actually cuts water consumption 95% . . . and all but eliminates the problem of water disposal.

But water is only one of the

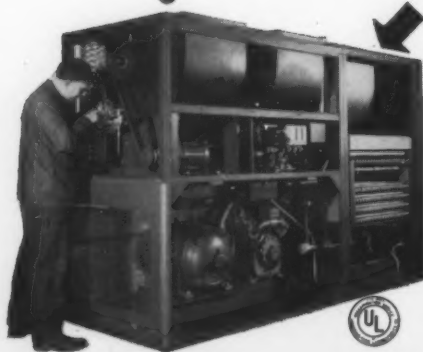
big economies you get with Refrigerated Kooler-air. It costs less to install . . . because it's compact, complete, needs less plumbing, less electrical work, fewer building alterations. It costs less to run . . . because it's completely pre-engineered and tested, accurately controlled by automatic thermal devices. It costs less to keep in tip-top running order . . . because it's sturdily, simply built, and protected by automatic safety devices.

When your customers are looking for top air conditioning performance and rock bottom air conditioning cost . . . tell 'em about usAIRco Refrigerated Kooler-air . . . and get the order!

## USES 95% LESS WATER

The water-saving secret is in the evaporative condenser. Once the unit is started, this condenser uses only enough water to replace the amount lost by evaporation. This loss is taken care of by an automatic float valve, which maintains tank level at a fixed point.

Result: total consumption of 5 gallons for every 95 gallons used by old-fashioned "water hog" systems!



UNITED STATES AIR  
CONDITIONING CORPORATION  
Come Ave. S. E. at 33rd  
Minneapolis 14, Minnesota

On the larger jobs sold by Refrigeration Sales Corp., the customer is also provided with a booklet containing operating and service instructions.

"The instruction booklet serves a dual purpose," Farr explains. "It indicates to the customer that our follow-up is in line with our original presentation, and we find that it also gives our own service department valuable information for our files."

"The booklet includes a copy of the blueprint used by our erection engineers, for later identification of any location as may be necessary. In addition, a break-down of the various equipment costs is included, so that the customer can expense it properly for tax purposes."

One of the things the operating and service instruction booklet contains, besides the data mentioned, are suggestions on what steps should be taken by the owner in case of mechanical trouble. To avert unnecessary service calls, a list of things to check before calling for service (such as whether the electrical switch is on, that fixtures are plugged in, etc.) is given.

Doing a thorough, workmanlike job of presenting your sales and service facilities in print gives your organization another lift that can't help but land extra jobs for you when the going is especially tough, competitively speaking. And those times are going to be increasingly frequent from now on.

## WAGNER LAUNCHES NEW INDUSTRIAL HOUSE ORGAN

Wagner Electric Corp. has introduced a new publication entitled "Wagner Industrial Product News" which the company is mailing to industrial concerns on a bi-monthly basis.

Objective of the publication is to periodically circulate news of the company's electrical products to industrial plants throughout the country.

## FLORIDA COUNTY BLDG. TO BE AIR CONDITIONED

A permit has been issued by the city of St. Petersburg, Fla., to the county commissioners for air conditioning of the new county building at 150 Fifth St., North, on a cost estimate of \$111,500. Durant Bros. of Tampa are the contractors.



## ABOUT PEOPLE . . .

*Continued from page 42*

sales; **Paul B. Best, Jr.**, vice president in charge of series motor sales; **James G. Kennedy**, vice president in charge of production; **Paul Maurer**, vice president in charge of engineering; **Wilfred R. Cox**, vice president in charge of market research and advertising; **W. Walter Young**, comptroller-treasurer.

**T. P. Stone** and **M. J. Cook** have joined Wolverine Tube Div., Detroit, as salesmen. They will call on com-



Stone

Cook

pany accounts in the states of Florida, Alabama, Georgia, Mississippi, Tennessee, and North and South Carolina. Stone, formerly with Linde Air Products Co., will headquarter temporarily in Atlantic Beach, Fla. Cook, formerly with Orgill Brothers, Memphis, will travel out of Jackson, Miss., for the present but will eventually headquarter in Atlanta.

**Herschel L. Johnson** has been appointed Coolerator district manager for the southeast. He will cover Georgia, Florida, North Carolina, and South Carolina.

**W. L. Winchester** has been appointed midwestern sales manager for Sherer-Gillett Co., Marshall, Mich. He will supervise sales in Iowa, Nebraska, Missouri, Kansas, Oklahoma, Arkansas, and Louisiana from headquarters in Carthage, Mo. Prior to his connection with Sherer, Win-

chester was assistant sales manager for Ebco Mfg. Co., Columbus, Ohio.

**Herbert Stumpf** and **Alex Kuehlthau** have been appointed district managers for Coolerator Co., Duluth. Working out of Buffalo, N. Y., Stumpf will cover dealers and distributors in northern New York and Vermont, while Kuehlthau will cover Washington, Oregon, Idaho, Utah, Wyoming, and Montana.

**J. J. (Jim) Laundergan** has

been named national freezer specialist for the company, and **Frank R. Wheeler** has been appointed supervisor of field engineers, in charge of all field service activities.

**Alexander MacLean** has been named field engineer for Tesco Distributors, refrigeration parts wholesaler, in Essex and Passaic counties, New Jersey. MacLean formerly was sales manager for the United Stoker Sales Co., and was with Dun & Bradstreet as analytical specialist.

# PAR'S NEW

EXTRA QUIET, LARGE CAPACITY  
CONDENSING UNIT!



IT TOOK  
40 MONTHS

of engineering, factory and field testing to develop these outstanding popular priced, compact Models. PAR RA-2 ( $\frac{1}{2}$  H.P.) and RA-3 ( $\frac{3}{4}$  H.P.) are designed for either self-contained or remote applications. They give trouble-free performance, operate "quiet as a whisper." Immediate delivery so see your PAR Dealer now.

## FEATURES OF THE RA-2, RA-3 MODELS

- Super quiet—compact design
- Slow speed—large capacity
- Oversize condenser
- Turbine type silent fan
- Ring type pistons—2 compression, 1 oil
- Interlocked eccentric and fly wheel—turns in either direction
- Built in oil separator—prevents circulation of excessive oil and liquid slugging
- Extra large fine screen strainer—prevents all foreign matter from entering compressor valves
- Resilient mounted motor—built in overload protection
- New super silent valves
- Suction and discharge line valves mounted on body—head readily removable

BY COMPARISON — YOU'LL BUY PAR



PAR AIR COMPRESSORS



PAR REFRIGERATION COMPRESSORS



WRAP-O-MATIC CANDY & COOKIE WRAPPING MACHINES



LYNCH CORPORATION  
PAR COMPRESSOR DIVISION  
TOLLEDO, OHIO



PAPER PACKAGING MACHINES



BUTTER & OIL PACKAGING MACHINES



GLASS FORMING MACHINES

# YOUR TIME IS MONEY!

## Streamline<sup>®</sup> LINE VALVES



- NO BOLTS!
- NO GASKETS!
- NO FLANGES!
- NO WRENCHES!
- NO EXCESS WEIGHT!



### YOU wanted these Advantages in a Line Valve—

**TIME SAVING:**— Easily disassembled before soldering. Entire operating unit consisting of stem, collar and bonnet removable in one piece.

**SAFE:**— Should the bonnet be removed from the valve with pressure in the line, the "O" ring reaches the counter-bore, allowing the pressure to be relieved through the vent holes before the threads disengage.

**POSITIVE SEALING:**— The use of the "O" ring between the stem assembly and valve body of this STREAMLINE Packed Refrigeration Line Valve provides a permanent, positive seal against loss of refrigerant, and also prevents infiltration when operating in vacuum.

**LIGHTER IN WEIGHT:**— Revolutionary design eliminates flanges, bolts and gaskets.

**BODY:**— Actual full flow design—Material...close grain red bronze.

**STEM AND DISC HOLDER:**— Two-piece, full floating, anti-rattle construction. Stem is of back-seating type, providing double seal and means for repacking if necessary.

**MOLDED NYLON STEM DISC:**— Considered the best material for refrigeration purposes.

**INSTALLATION:**— Cadmium plated steel mounting brackets and screws provided.

**INDIVIDUALLY CARTONED:**— Protects your investment until ready to use. Clean, safe from damage in transportation to the job.

**FAMOUS STREAMLINE QUALITY THROUGHOUT**  
ORDER FROM YOUR WHOLESALER

**MUELLER BRASS CO.**

PORT HURON, MICHIGAN

## Get Your Money's Worth!

**ARE** you getting your money's worth from your newspaper advertising?

As the man who foots the bills, you of course are vitally interested in results. You want to be sure that your advertising will bring in the desired returns, that it will increase your sales volume. While exact results are impossible to predict, here are some suggested ways to minimize the uncertainty of promotional material.

First, ask yourself these three questions:

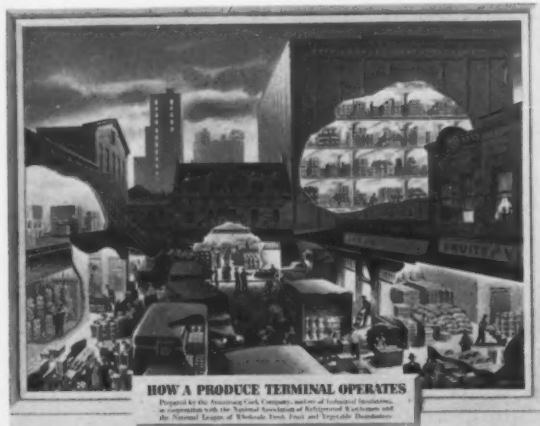
1. Will the public be attracted by the headline?
2. Will the illustration help to sell the merchandise?
3. Will the copy really make the reader come into the store and buy the product?

Check your headline first. Be sure it will get the reader's attention. Be sure it is short, easy to read, well worded. Be sure that it will arouse the reader's interest.

Then check your illustration. Illustrations should simplify the copy, make the ad more understandable and easier to grasp. One way to make illustrations easy to understand is to give them captions, since captions are often read before the copy.

Next, check your copy carefully. The body copy is the most important part of your advertisement, since it is your opportunity to present a sales message. Make sure your copy SELLS. Make sure it explains what the product is, and how the reader can benefit from using it. Copy should also ring true. Most of your readers have had so many superlatives thrown at them that they are naturally skeptical. In your copy, assure the reader he is getting the truth. For instance, you can tell him about satisfied users. Use of well known brand names also has reader influence.

In the final analysis, you the advertiser should tell your reader what the product is, how it works, what it can do, and how much it will cost. Price, however, means nothing unless benefits received are firmly established in the reader's mind. Your readers will act if you convince them through your advertising that you are offering quality merchandise at a price which will result in real benefits to them and to their way of living.



Another in the series of educational advertisements being used by the Armstrong Cork Co. in consumer publications, this one depicts the inner workings of a produce terminal. It was prepared in cooperation with the National Association of Refrigerated Warehouses and the National League of Wholesale Fresh Fruit and Vegetable Distributors.

## Specify MARLEY NOZZLES



### For Dependable Service

Marley patented Spray NOZZLES are used by industries where efficiency and economy are required.

Write today for your Copy of the Marley Spray Nozzle Bulletin.



**THE MARLEY CO., INC.**  
KANSAS CITY 15, KANSAS

## New Profits For You

### LEARN TO REBUILD—

#### - Sealed Refrigeration Units

A Sixteen Week Training Program dealing exclusively with the local repair of hermetically sealed refrigeration units has recently been added to our curriculum . . . Opening a New Profitable Field in Refrigerator Repair and Servicing . . . The recently developed repair process is already being featured by dealers in many parts of the country . . . Because of the highly technical nature of this repair work, we offer this training only to graduates of accredited refrigeration schools and to refrigeration service men with an equivalent background.

We have a few graduates in our June Class that have not been placed as yet. We will be happy to send a complete profile on these students to prospective employers.

For  
Veterans  
And  
Non-  
Veterans

FREE PARTICULARS—

MAIL THIS COUPON TODAY

PRACTICAL TRADES INSTITUTE, INC.  
25 University Ave., S.E. Dept. CR-6  
Minneapolis 14, Minn.

Gentlemen:

I am interested in the training you offer. Please mail at once FREE particulars.

NAME .....

STREET .....

CITY..... ZONE.... STATE....

# Good for Compressors— Good for Business

**Texaco Capella Oils assure  
more efficient  
compressor operation—more  
satisfied customers**



**R**EFRIGERATING compressors lubricated with *Texaco Capella Oils* give their owners longer, more trouble-free and economical service. This builds the reputations of service men who use *Texaco Capella Oils* . . . increases business for them—increases sales for dealers and distributors.

*Texaco Capella Oils* are highly refined, moisture-free, exceptionally stable oils that do not react with refrigerants. Their exceptionally low pour tests and high resistance to gumming and sludging keep compressors and coils *clean*, assuring higher efficiency and lower operating costs.

Leading compressor manufacturers approve the use of *Texaco Capella Oils*, and you can get them in suitable viscosities for compressors of every size and type.

They come in handy 1-qt., 1-gal. and 5-gal. containers sealed to prevent contamination.

You'll do more business with *Texaco Capella Oils*! The Texas Company, 135 East 42nd Street, New York 17, N. Y.

**FREE LUBRICATION GUIDE**—Latest edition. Lists makes and types of compressors and refrigerants used in 63 Electric Refrigerating Units and 31 Air Conditioning Units. Shows recommended grade of *Texaco Capella Oil* for each. Use guide as wall chart, or bind into service manual.



**TEXACO Capella Oils**  
FOR ALL AIR CONDITIONING AND REFRIGERATING EQUIPMENT



Tune in . . . **TEXACO STAR THEATRE** every Wednesday night starring Milton Berle. See newspaper for time and station.



# THE PRACTICAL Refrigeration Applications MANUAL...by Harold Smith

**T**HE Practical Refrigeration Applications Manual extends a helping hand to those refrigeration and air conditioning men who occasionally encounter field engineering problems too tough for them to handle. Space limitations make it impossible to give complete detailed information covering each step necessary for the installation or erection of refrigeration equipment, insulation, or fixtures. It is necessary to assume that those readers who request assistance with their problems are familiar with these basic fundamentals. If they are not, it is suggested that they seek this advice from their sources of supply when purchasing the materials which they intend to use on the job. Most suppliers are equipped to furnish such information. Readers are urged to submit their problems to this department. Each letter of inquiry will be answered personally by the author. The most interesting ones will be published in these columns. All problems should be clearly and completely stated and addressed to: **COMMERCIAL REFRIGERATION AND AIR CONDITIONING**, Manual Dept., 1240 Ontario St., Cleveland 13, Ohio.

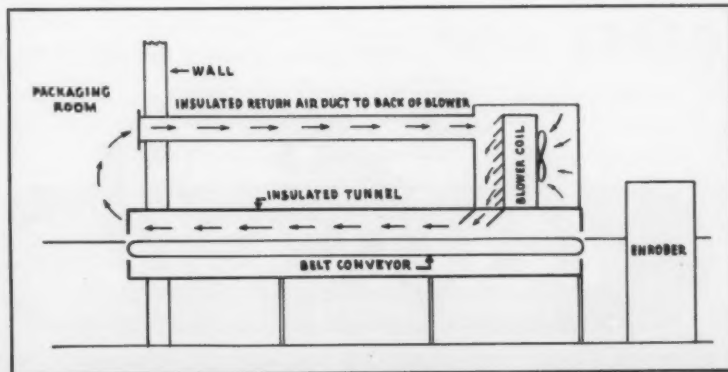
## PROBLEM

"**W**E WOULD appreciate any information you can give us regarding the use of refrigeration in candy manufacture. A customer of ours is constructing an addition to his candy factory and we would like to be conversant on the subject of desired humidity, temperature, etc. in a candy factory.

"We have been asked to figure a unit to take care of a cooling tunnel. We believe that similar installations must be in use and would appreciate any information regarding them."

## SOLUTION

We wish to acknowledge your letter asking for information on refrigeration for candy manufacturing. Chapter 12 of the Practical Refrigeration Engineering Manual, which appeared in the April, May, June and July, 1946, issues of **THE REFRIGERATION INDUSTRY** magazine, covers this subject quite completely. The same material now is available in complete form in the **COMMERCIAL REFRIGERATION AND AIR CONDITIONING MARKETING HANDBOOK**, produced by the publishers of this magazine.



The most efficient and desirable arrangement where an enrober and cooling tunnel are used is to build a tunnel starting at the enrober and continuing for 35 to 50 feet into an insulated and air conditioned packaging room. The cooling tunnel itself should be insulated and should completely enclose the conveyor belt.

### AIR FLOW OUTLINED

A refrigeration blower coil should be located in a complete enclosure on top of the tunnel at the enrober end, with the air directed into the tunnel in the direction of the packaging room. An insulated return air duct, either from the end of the tunnel at the packaging room or directly from the packaging room, should return air to the blower unit.

Proper temperatures in tunnel and packaging room are from 55 to 65 F. with relative humidity of 50 to 60%.

### CHOCOLATE MUST SET

The chocolate coating on the candy must set while traveling through the tunnel from the enrober to the packaging room. In the packaging room employees take the candy from the belt and pack in boxes. If the coating has not set properly, some of the coating will stick to the belt, completely upsetting the production and ruining the candy.

Temperature and humidity must not be too cold or low, as this has a tendency to bring the fats in the chocolate to the surface, changing the color of the chocolate to a light yellow in spots. The specific heat of the chocolate is .90. The temperature of the chocolate should be reduced from 90 to 65 F or 25 degrees, while traveling through the tunnel.

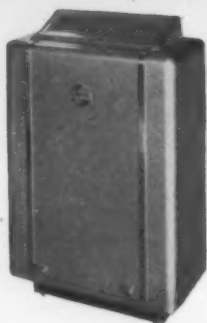
Heat leak into the tunnel must be considered in estimating the refrigeration load.

### SKETCH SUGGESTS LAYOUT

If you would care to submit the actual figures on load requirements, we will be happy to prepare our refrigeration load recommendations for the tunnel and packaging room. We must have complete information, however, regarding the number of pounds of candy going through the tunnel per hour, the length of tunnel, the insulation and size of tunnel, the size and insulation of packaging room, the number of people working in the room, number and size of lights in room, and maximum temperature in the factory outside packaging room and tunnel.

The accompanying sketch may be helpful to you in your layout for this equipment.

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**



# BREEZ-E-FEX

By

# KRACK

A NEW AND  
DISTINCTIVE COMFORT COOLER

One you will want for your office and home.

You will want this attractive console model comfort cooler that combines the rich beauty of its golden bronze, completely insulated cabinet, with the matchless performance of the KRACK tried and proven AIR-E-FEX Coil. You will like an installation that eliminates machine noise by remote placement of the condensing unit leaving only the subdued rustle of gently moving air. You will be pleased with the eye appealing design of the cabinet and the ready accessibility of its interior.

Beautiful—Efficient—Silent—That's Breez-E-Fex, another KRACK triumph. Equipped with adjustable outlet grille, sloped to eliminate dirt streaks on walls. Available in  $\frac{3}{4}$  - 1 -  $1\frac{1}{2}$  ton sizes with Direct Expansion or Water Coils. Heating Coils optional.

P.S. You will be amazed at the number of your customers who will want one too.

Write for KRACK Bulletin #6149

REFRIGERATION  
APPLIANCES Inc.

923 W. LAKE ST. CHICAGO, ILL.

## CLEVELAND WHOLESALER ADDS AKRON BRANCH

Refrigeration Supplies, Inc., Cleveland wholesaler of refrigeration parts and equipment, has intensified its coverage of the northeastern Ohio area through purchase of Akron (Ohio) Refrigeration Supplies, Inc., which since May 1 has been operating as a branch of the Cleveland firm.

In announcing this latest acquisition, J. H. Downs, president of Refrigeration Supplies, made it clear that the Akron store will continue to be operated by J. S. (Joe) Moore and B. R. (Bert) Armstrong, with these former owners of the Akron firm becoming members of the board of directors of the Cleveland organization.

Additional lines of equipment now are being stocked in the Akron branch to broaden and diversify its service to customers, Downs reports.

Refrigeration Supplies also operates a branch in Youngstown, Ohio, in addition to its Cleveland headquarters.

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**



**TERRITORIES OPEN**

## YOUR AMCOIL MAN IS...

### READY

to explain Amcoil's firm distributor policy.

### WILLING

to prove Amcoil's new, fair inventory deal.

### ABLE

to make instant shipment of improved, all-copper-welded Amcoil cooling units from a complete line.

## ORDER NOW

and Make the Most of the Amcoil Story



AMERICAN COILS COMPANY, 360 THOMAS ST., NEWARK 5, N. J.

JUNE, 1949 • COMMERCIAL REFRIGERATION

# DRYSEAL

**means easy  
installation**

**...and only  
REVERE  
makes it!**

Revere DRYSEAL Copper Refrigeration Tube means easy installation because it's so uniformly soft, so easy to bend.

The ends won't split when flared. Tube interior is kept *permanently clean and dry* with a new mechanical end seal. Moreover, that seal has the same diameter as the tube, will pass through any opening large enough for the tube itself.

DRYSEAL gives you new, more economical

standards . . . comes in a bright new package to keep it clean and attractive, readily identifiable in stock. Sized  $\frac{1}{8}$ " to  $\frac{3}{4}$ " O.D., DRYSEAL is packed two 50-foot coils to a package.

Next time you buy refrigeration tube, contact your REVERE Distributor. He has DRYSEAL . . . the pliable soft, easy-to-bend copper refrigeration tube that assures you top quality in every length you buy. DRYSEAL always means an easier job for *you*.



**REVERE**  
COPPER AND BRASS INCORPORATED

*Founded by Paul Revere in 1801*

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.;  
Los Angeles and Riverside, Calif.; New Bedford, Mass.;  
Rome, N. Y.—Sales Offices in Principal Cities,  
Distributors Everywhere.



replace it right with *Ranco*

## for trouble-free service on HOUSEHOLD REFRIGERATORS and FREEZERS

To insure complete customer satisfaction on every control replacement job, *replace it right* with Ranco Refrigeration Controls. You'll do the job easier, faster, make greater profits—for call-backs are eliminated. Ask your Ranco wholesaler to show you the complete line of dependable, precision-built Ranco Replacement Controls . . . models and types for general and exact replacement of all household and freezer controls.



RJ-3110

### ✓ CHECK WITH *Ranco* FIRST

- specialists in refrigeration
- dependability
- greater customer satisfaction
- more Ranco controls in use
- less stock to carry
- more profit for you

**Ranco Inc.**  
COLUMBUS 1, OHIO



World's Largest Manufacturers of Refrigeration Controls  
. . . more than 20,000,000 controls now in use



## Here's how

Edited by  
Warren W. Farr

### Points on Installing Low Pressure Systems

Proper installation of low pressure systems is of the utmost importance if these systems are to function satisfactorily. Sound installation practices must be observed, regardless of the size or horsepower of the equipment to be installed.

The same general principles apply in all cases. All systems have the same basic components, chosen to provide predetermined design conditions of temperature and humidity. Improperly installed systems are apt to fail to meet requirements and to result in user dissatisfaction, and to necessitate frequent service adjustments.

Generally speaking, there are a few fundamental steps that should be recognized as important. These steps, which should be followed when installing all the components that go to make a completed commercial system, are as follows:

### I do it this way...

**T**O facilitate belt adjustment and service on compressors using slotted base motors I remove the motor and replace the regular bolts with bolts which are  $\frac{1}{2}$  inch longer and threaded to the hex.

I insert these longer bolts through the compressor base and use a lock washer and nut to pull them up tight. Then I set the motor base over the longer bolts and use additional nuts to hold the motor in place.

The longer studs hold the motor and belt in alignment, adjustment of the belt is simple, and the motor can be removed or replaced without losing your religion.

Woody Refrigeration Service  
Des Moines, Iowa.

### WANT TO EARN \$5?



You don't have to be a writer or a literary genius! Just jot down some of the shortcuts you've developed in your maintenance or installation work and send them to **HERE'S HOW** EDITOR, COMMERCIAL REFRIGERATION AND AIR CONDITIONING. Your \$5 will be paid promptly when your maintenance tip is published in the magazine. Let's hear from you!

1. Locating and installing the cooling coil.
2. Locating and installing the refrigerant metering device.
3. Locating and placing the condensing unit.
4. Selecting and installing the refrigerant lines, fittings, and other accessories that may be required.
5. Processing the system.
6. Charging the system with refrigerant and oil.
7. Final leak test.
8. Setting the controls.

It can readily be seen that these foregoing factors are fundamental, but nevertheless one or more of these elements all too often is slighted or completely overlooked.

(Editor's Note: In subsequent issues of **COMMERCIAL REFRIGERATION AND AIR CONDITIONING** we shall discuss each of these eight points in greater detail.)

### Make Your Business Cards Do Double Duty

Do your business cards click? Is there anything distinctive or unusual about them which tends to indelibly impress your name in the consciousness of your customers and prospects?

If not, then you're missing a good bet. Your cards are failing in one of their most important functions.

Here a couple of ideas you might use to put a little more punch into your business cards or to give them some lasting value so that they will be retained by the people who receive them rather than tossed into the nearest waste basket.

One dealer of our acquaintance has his salesman's name printed on the reverse side of a small glossy photograph of the front of the company's store building. This snapshot impression never fails to attract immediate—and lasting—attention.

Another useful idea is to print on the reverse side of your cards the schedules of forthcoming football,

### I do it this way...

**T**HE newest type of compressor valve plates for  $\frac{1}{2}$ -hp Brunner compressors have two suction valves fastened by means of four pins.

In order to put this type of valve plate on the older type of Brunner compressor, which makes no provision for these four pins on the cylinder block, I drilled four holes on the cylinder block of the old compressor into which the pins could fit. The compressor worked very nicely with this new arrangement.

Daniel Eisenberg  
New York, N. Y.

(Editor's Note: This same procedure could be used on a number of other types of compressor.)

**odorless**

*Jarrow...*

Refrigerator Door Gaskets Are Again  
Made From Crude Rubber

Always Demand These  
Quality Gaskets

**JARROW PRODUCTS**  
420 N. LA SALLE ST., CHICAGO 10, ILLINOIS

## Sensational New Way to Reoperate Valve Plates & Pistons

**PREMIER Self-Aligning Valve Grinding Kit** makes it possible to save up to 90% in time and money by reoperating your own valve plates and pistons **FAST!** . . . in the shop or on the job.

Yes, this amazingly low-priced kit, compactly packed in handy case, makes it easy for any refrigeration service man to grind, finish and test recessed or flush valve seats in little more time than it takes to read this ad! No more tiresome hand lapping. Pays for itself in reoperating as few as six valve plates!

**Send TODAY for FREE Literature  
and Name of Nearest Jobber.**

THE PREMIER COMPANY  
891 Park Ave. Baltimore 1, Md.

Send Literature on PREMIER KIT.

Name.....

Address.....

City..... State.....

**THE PREMIER CO.**  
891 PARK AVENUE • BALTIMORE 1, MD.

basketball, or baseball games, or any other sporting events in which your customers and prospects might be interested.

Why not try some such idea the next time you have some cards printed, and see for yourself how much favorable comment such cards will attract?

### Novel Layaway Plan Eases Down Payment

One dealer we know aggressively went after refrigerator business this spring with an unusual promotion under which the store suggested that customers order in February for May delivery, thus sidestepping the down payment requirements of Regulation W.

Under this plan, customers were invited to pay a relatively small amount down (far below the limit set by the government regulation) in February, and then make additional small payments each month in March, April, and May, thereby accumulating the required down payment in several easy stages prior to actual delivery of the merchandise.

In its newspaper advertising announcing this plan the company pointed out that not only did the delayed-action arrangement ease the down payment problem but it also protected the customer against the continuing threat of rising prices during the interval between order and delivery.

### Coil Cleaning Methods

**Question:** How can the insides of new steel cooling coils for use with methyl chloride, Freon-12, and ammonia refrigerants be effectively cleaned so as to insure that they are free from scale, rust, dirt, and moisture?

**Answer:** It is possible to clean steel pipes by grit blast after the pipe has been bent into grid or coil forms. This has been done successfully on 3/4-inch pipe 70 feet long which has been bent into a grid consisting of nine 190 degree bends. Such a coil can be cleaned by this method in about 30 seconds. The time must be properly controlled, however, because too much grit blasting of the pipe begins to thin the wall, particularly at

the bends. The grit blasting should be followed by a blast of dry air at approximately 300 psi.

### "Moisture Problems" Series Draws Comment

Editor:

On the subject "Moisture Problems and the Serviceman" as covered in the articles of March, April and May issues, I completely disagree with Joe Langford's solutions of these problems.

The special gadgets and hazard heating of CO2 all seem to add to the accident hazard, which in our field is already high enough. Why is it necessary to complicate a comparatively easy solution of moisture in a system?

A 1/4 hp motor and small compressor mounted in a head to toe position in a small frame on castors makes a perfect portable evacuating unit capable of pulling a 28-inch vacuum. A heat lamp in an insulated cooler, ice cream freezer or what have you can bring up the temperature to 100 F which is higher than necessary to boil all free water.

True, perfect drying is impossible, but maximum drying is possible. The condensing unit need not be disconnected, except to remove the oil from the crankcase, but by using a second heat lamp it is possible to heat all metal surfaces to over 100 F, thus evacuating and drying the entire unit on the job in approximately 12 hours.

After unit is dry, add gas charge of F-12 to break vacuum and add oil to crankcase (new oil of required specifications). A refillable silica gel dryer should be installed in the coolest section of the liquid line as close to expansion valve as possible. Unit is now ready to be charged and put in operation.

I have never seen silica gel do the slightest damage to any compressor. If silica gel gets loose in a system it must be from corrosive acids eating the restrictive screens, and a thorough cleaning is necessary to remove the acids and the cause of acids.

If a dryer is installed on any unit, regardless of where, it is good practice to use three shut-off valves with one acting as a bypass permitting removal of the dryer while system is in operation.

Henry B. Boyer

### HEADS EXPORT SALES

Jack E. Savage has been named head of the refrigeration sales and service group of foreign operations, International Harvester Co. He succeeds Robert J. McMenamin, who has been assigned to foreign duty.

# SALESMEN and CONTRACTORS CANNOT AFFORD to be WITHOUT THIS BUSINESS BUILDING SOURCE of Factual Information!



## The COMMERCIAL REFRIGERATION and AIR CONDITIONING MARKETING HANDBOOK!

There is commercial refrigeration data compiled in the MARKETING HANDBOOK that has never before been included between two covers. Think what it means to have at your finger tips one carefully indexed source which covers:

- What equipment is used in 40 potential sales fields.
- The selling techniques of some of the most successful men in the business.
- Data on how, where and why certain equipment can be sold certain types of trade.
- The engineering data that will enable you to figure many jobs with no outside assistance.
- A cross index of (1) which manufacturers make each type of equipment and (2) what equipment is available and who builds it.

EVERY WEEK YOU'LL FIND  
IT PAYS TO CONSULT  
THIS FACT FILLED  
VOLUME OF 448 PAGES



### AN INDISPENSABLE SELLING TOOL FOR ONLY \$5.00

Here's the guide to greater profits for which dealers and their salesmen have been waiting. Here's an indispensable selling tool that points out WHAT equipment to sell, WHERE and HOW to do it. Here's vital information on every piece of air conditioning and commercial refrigeration equipment manufactured and where it is available.

The trade acclaimed our first announcement of the MARKETING HANDBOOK with enthusiasm. We say now that it will be even more complete—more informative than originally planned.

#### MAIL THIS ORDER BLANK TODAY

MANUFACTURERS DIRECTORY CO.  
1240 Ontario St., Cleveland 13, Ohio  
Send me.....copies of the Commercial Refrigeration and Air Conditioning Marketing HANDBOOK as soon as it is off the press. Price \$5.00 (postage paid). Please indicate in box below which is enclosed:  
☐ MONEY ORDER ☐ CHECK  
☐ COMPANY PURCHASE ORDER

Signed.....  
Name of Company.....  
Address.....  
City and State.....

# OPPORTUNITIES

## Classified Advertising Section

Rates: for "Positions Wanted," \$4.00 minimum, limit 25 words. For all other classifications, \$4.50 minimum for 25 words or under, each additional word 15c; boldface type or all capitals, \$7.50 minimum for 25 words or under, each additional word 20c. Box addresses count as five words, other addresses by actual word count. All advertisements in this section are payable in advance.

### BUSINESS OPPORTUNITIES

New York Area. Refrigeration Contracting, established over 15 years. Total volume 1947 & 1948 \$500,000. Excellent location and facilities. Will sell with or without building. For particulars write Sanderson & Engel, Attorneys, 17 Academy Street, Newark, New Jersey. Confidential.

Well established Refrigeration Service Business for Sale. Located in Arizona town. Priced for quick sale. Netted over \$5,000.00 last year. Box 6149.

**SERVICE MEN ATTENTION:** If you have been getting gray hairs from moisture troubles write for information on our new patent mechanical (\$4.00) moisture separator which eliminates all such worries. Salesmen wanted. Write Tech Laboratories, Inc., Palisades Park, N. J.

**WANTED!** 750 Servicemen interested in making more money rebuilding Coldspot Hermetic units. Field wide open—big demand for service everywhere. Our produc-

tion of complete line of parts and tools dependent on immediate response of 750 servicemen who are wide awake to exceptionally profitable opportunity. Send name and address, and get with trend to Hermetic service work. Beil & Company, 501 S. Filmore, Kirkwood 22, Mo.

### CARRIER TO CONDITION 3 NEW PASSENGER SHIPS

Carrier Corp.'s Marine Department has signed a contract with New York Shipbuilding Corp. for the complete air conditioning of three large, new 19-knot passenger-cargo liners now being built for the American President Lines at Camden, N. J.

### SEALED UNIT REPAIR TRAINING OFFERED

Local repair and rebuilding of the hermetically sealed refrigeration unit is now being taught in an intensive 16-week training course at Practical Trades Institute, 25 University Ave., SE, Minneapolis. Opening a new field in refrigeration maintenance and repair, this service is already being

featured by dealers in many parts of the country.

The course emphasizes practical work in the repairing and rebuilding of all types of sealed unit. This includes stator rewinding, compressor repair as well as making special tools required in this highly technical repair work. The sealed unit repair course is open to graduates of accredited refrigeration schools and to refrigeration service men with an equivalent background.

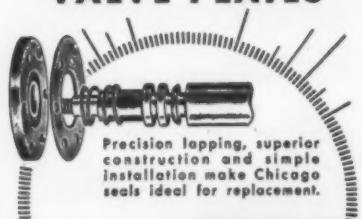
Information about the course of training and about graduate personnel available for sealed unit repair work will be furnished by Practical Trades upon request. The school will also furnish technical information and lists of necessary equipment to dealers planning to open sealed unit repair service departments.

### NEW OFFICE BUILDING IS AIR CONDITIONED

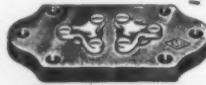
New administration and sales headquarters building of American Stove Co., recently opened in St. Louis, is completely air conditioned. Equipment for the new building included Marlo cooling coils and blast steam coils exclusively, and three Chrysler Airtemp 50-ton radial compressors. Sodemann Heating & Power Co., air conditioning contractor, installed the equipment.



USE  
CHICAGO SEALS  
and  
VALVE PLATES



Only Chicago valve plates have replaceable seats.



CHICAGO SEAL CO.  
222 S. MYNNE AVE. CHICAGO 12, ILL.

**NO MORE FREEZE-UPS**  
of expansion valves or capillary tubes!

**ICE-X** works like magic  
SERVICE MEN SAY: "ICE-X IS GREAT!"



When ice forms in expansion valves or capillary tubes, ICE-X is a sure remedy . . . ICE-X is non-corrosive—harmless to parts. An ice-eliminator that can't be beat for Freon, Carrene, or Methyl Chloride systems . . . Order from your jobber. If no jobber, order direct.



Service doesn't falter  
when it comes from Harry Alter

Jobbers: Ask for special offer!

**The HARRY ALTER CO.**

Exclusive  
ICE-X  
Distributor

1728 S. Michigan Ave. Chicago 16, Illinois



## NOEL TO HEAD REMA MILK COOLER SECTION

At a meeting of the milk cooler product section of Refrigeration Equipment Manufacturers Association, held in Chicago, the following officers were elected to serve during the fiscal year period from May 1, 1949 to April 30, 1950:

J. Kingsley Noel, Jr., vice president, Victor Products Corp., Hagerstown, Md., chairman; Henry Steinhorst, president, Emil Steinhorst & Sons, Utica, N. Y., vice chairman; John E. Wilson, Jr., president, Wilson Cabinet Co., Smyrna, Del., secretary.

It was decided to hold separate meetings of this group during the fiscal year on May 24, Sept. 13, and on Jan. 10, 1950.

The following definite objectives were agreed upon as desirable accomplishments of the milk cooler product section for the coming year:

1. To get the various states to agree on a uniform method of ratings and codes in connection with the sale of milk coolers.
2. To secure more complete and better statistics on the sales performance by the industry.
3. To endeavor to increase the membership so as to get all possible manufacturers of milk coolers as members of the Section.
4. To establish definite rating and application standards for milk coolers.
5. To hold at least three regular meetings per year, plus special meetings whenever considered desirable.
6. To explore the practicability of a cooperative industry advertising program to be sponsored by the section.

## CONTRACTORS MEET WITH WHOLESALEERS IN CHICAGO

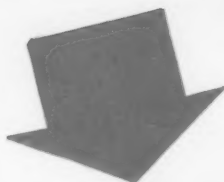
Directors of Refrigeration Equipment Wholesalers Association were hosts to representatives of NARC at a luncheon in the Edgewater Beach Hotel during the recent REMA-REWA spring meeting. In a session of the two groups afterward, a general discussion of problems in the industry took place, and a plan was adopted whereby the two associations can keep in closer touch with each other throughout the year by means of appropriate committees.

Contractors were represented at the meeting by Warren W. Farr of Cleveland, chairman of the trade relations committee; president H. E. Wheeler, Walter McCarty, and T. J. Reedy, all of Chicago. The corresponding REWA committee is headed by N. W. Edwards of Refrigerating & Power Specialties Co., San Francisco.

**BUY FROM YOUR  
REFRIGERATION WHOLESALE**

# VIRGINIA

# Refrigerants



## "EXTRA DRY ESOTOO"

Liquid Sulfur Dioxide

## "V-METH-L"

Methyl Chloride

# consistently pure consistently sure



## VIRGINIA REFRIGERANTS

West Norfolk • New York  
Boston • Detroit

VIRGINIA SMELTING COMPANY  
WEST NORFOLK, VA.

Distributors for  
Kinetic's "Freon" Refrigerants

SERVING INDUSTRY FOR 50 YEARS

"EXTRA DRY  
ESOTOO"

"V-METH-L"

Available from  
wholesalers  
coast to coast



# Genuine Joe says -

Genuine WAGNER Capacitors  
are the "Real McCoy"!



The "Real McCoy" is always best...never "just as good." When new capacitors are needed, *play safe*—replace with *genuine* Wagner capacitors. You are assured of the same high quality as the original capacitor.



## LOOK FOR THESE SIGNS...

They identify Wagner's nationwide network of 450 Authorized Service Stations and Parts Distributors. They mean that you can find a complete stock of genuine Wagner motor replacement parts—the same assembly-line motor parts that have given Wagner Motors an outstanding reputation for dependable, trouble-free performance.

## Write for CATALOG MU-40

Every repair shop needs one. It helps determine the catalog number and price of Wagner Motor Parts.



6442 PLYMOUTH AVENUE  
ST. LOUIS 14, MO., U. S. A.

ELECTRICAL EQUIPMENT AND AUTOMOTIVE BRAKE PRODUCTS


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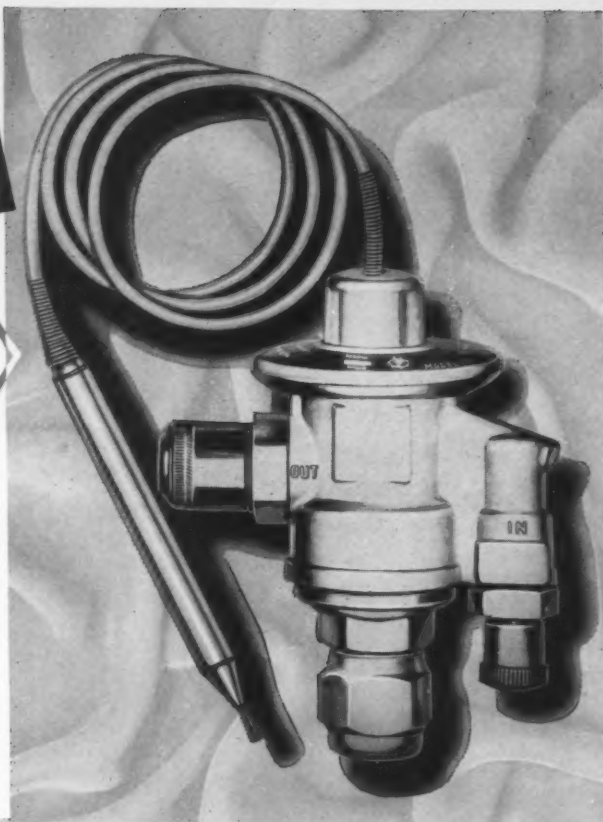
**DEPENDABILITY**  
is a good component  
for your product

*One  Valve serves  
all suction temperatures  
without adjustment*



### **MODEL 207, 1/2 ton THERMOSTATIC EXPANSION VALVE**

Here's versatility that benefits you . . . ONE valve you can confidently use on all your 1/4 to 1/2-ton systems, sub-zero freezers, commercial boxes and air conditioning units. A-P Model 207 Thermostatic Expansion Valve handles them all accurately, dependably, without adjustment or changing of parts! You avoid buying and carrying extra valves. You're always sure of trouble-free service, supersensitive response, closer superheat control and the kind of control dependability that means customer satisfaction. Liquid charged for mounting in any position or ambient temperature. Use it today . . . to your profit.



*Avoid Overload Dangers  
with this Pressure Limiting*



### **MODEL 212 VALVE FOR 1/2 TON AND 1 TON SYSTEMS**

A-P Model 212 is "performance protection" on any system where abnormally high suction pressure may cause an overload problem. Install it in place of any thermostatic expansion valve of similar capacity (1/2 and 1 ton Freon 12 or Methyl). New, extra diaphragm unit limits operating suction pressure to predetermined setting—15, 40, and 55 lbs. Freon 12, and 10 and 30 lbs. Methyl. Thermostatic bulb and standard large-area diaphragm "take over" after overload condition has passed. Liquid charged, may be mounted in any position or ambient temperature. Fixed superheat model No. 211, also available.



### **AUTOMATIC PRODUCTS COMPANY**

2486 North Thirty-Second Street, Milwaukee 10, Wisconsin  
Export Dept. 13 East 40th St., New York 16, N. Y.



# **DEPENDABLE** *Refrigeration Valves*

STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALERS EVERYWHERE . . .  
RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

# C.B.P.

MEANS BUSINESS

**YOU CAN'T BEAT THE  
"C.B.P." PLAN FOR  
REACHING BUYERS**

In the case of COMMERCIAL REFRIGERATION and AIR CONDITIONING, the C. B. P. Plan (Certified Buying Power) means more than 26,000 readers who are "known" buyers. These individuals are hand-picked from the customer-prospect lists of 49 selected refrigeration and air conditioning equipment wholesalers located in key marketing areas. To the CCA guarantee of QUANTITY circulation, COMMERCIAL REFRIGERATION and AIR CONDITIONING thus adds the C. B. P. QUALITY guarantee of authenticated, "known" reader-buyers. Here is the needed sales link for the advertiser.

Each of COMMERCIAL REFRIGERATION and AIR CONDITIONING'S 49 refrigeration equipment wholesalers subscribes to the magazine for his active customers and prospects. He pays us \$1.44 a year for each subscription. This guar-

antees that each COMMERCIAL REFRIGERATION and AIR CONDITIONING reader is interested in the editorial contents of the magazine, and—equally important—is an active, authenticated buyer of refrigeration and air conditioning equipment . . . the distributor being the authenticating agent.

COMMERCIAL REFRIGERATION and AIR CONDITIONING means business. Its more than 26,000 readers are YOUR potential buyers because they are also active, current customers of leading refrigeration and air conditioning equipment distributors. Here is circulation representing the known national market for refrigeration and air conditioning equipment . . . a buying audience to whom you must tell your story.

"Certified Buying Power" is a powerful lever which you can use to raise your sales volume.

Other "C. B. P." magazines published by the Industrial Publishing Company are FLOW, for the material handling equipment field, INDUSTRY and WELDING, for the welding equipment and supply field, OCCUPATIONAL HAZARDS, for the industrial safety, health and fire protection field, and APPLIED HYDRAULICS, for the hydraulic field. Send for our booklet: "The 'C. B. P.' Plan . . . A New Dimension Added to Standard Magazine Audits."

**COMMERCIAL REFRIGERATION and AIR CONDITIONING**  
**1240 ONTARIO ST. CLEVELAND 13, OHIO**



